INITIAL STUDY

Main-Glenrock Residential Project

Application File Numbers ZA-12-04, SD-12-04, DA-12-05, EA-12-06

CITY OF MORGAN HILL

November 2013

TABLE OF CONTENTS

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

SECTION 1 INTRODUCTION AND PURPOSE

This Initial Study of environmental impacts is being prepared to conform to the requirements of the California Environmental Quality Act (CEQA), the CEQA Guidelines (California Code of Regulations §15000 et.seq.) and the regulations and policies of the City of Morgan Hill.

This Initial Study evaluates the environmental impacts that might reasonably be anticipated to result from implementation of the proposed Main-Glenrock residential project. The approximately 3.64-acre project site (Assessor's Parcel Number 726-20-053) is located in the City of Morgan Hill and is bordered by single-family residences to the north and south, East Main Avenue to the east and Calle Siena to the west. The project applicant has requested a zoning amendment to approve a precise development plan of the *R1-7000 RPD (*Residential Planned Development*)* zoning district. The proposed project would allow for the subdivision and development of 12 lots and improvements to an existing open space area. The precise development plan also proposes deviations to the existing development standards of the Morgan Hill Municipal Code. Other proposed improvements include: new storm water facilities, sound walls and retaining walls, a new public street, sidewalks and landscaping.

The City of Morgan Hill is the Lead Agency under CEQA and has prepared this Initial Study to address the impacts of implementing the currently proposed project.

SECTION 2 PROJECT INFORMATION

2.1 PROJECT TITLE

Main-Glenrock Residential Project (ZA-12-04, SD-12-04, DA-12-05, EA-12-06)

2.2 PROJECT LOCATION

The project is an approximate 3.64-acre site located between Calle Siena and East Main Avenue, and is approximately 350 feet northeast of Grand Prix Way (refer to Figures 2.2-1 and 2.2-2). Butterfield Boulevard is approximately 0.4 miles west and Highway 101 is approximately 0.4 miles east of the site. The project site is bordered by single family residences to the north and south, Calle Siena to the west, and East Main Avenue to the east. Single-family residences also occur immediately west of Calle Siena Road and east of East Main Avenue (refer to Figure 2.2-3).

2.3 PROPERTY OWNER/PROPONENT

Calle Siena LLC
Rocke Garcia
1000 Old Quarry Road
San Jose, CA 95123

2.4 LEAD AGENCY CONTACT

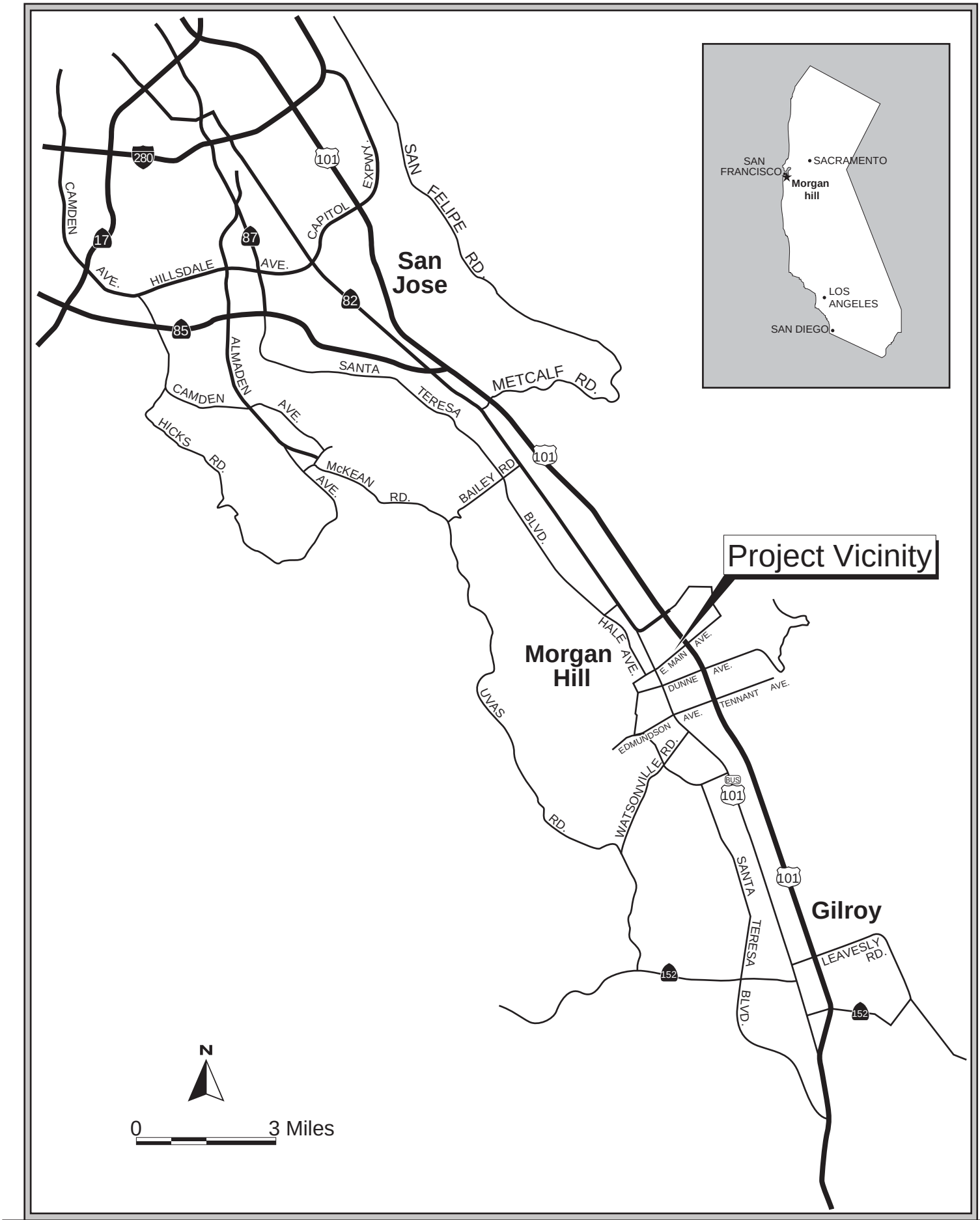
City of Morgan Hill
Steve Golden, Associate Planner
Community Development Agency
17575 Peak Avenue
Morgan Hill, CA 95037
(408) 778-6480

2.5 ASSESSOR'S PARCEL NUMBER

726-20-053

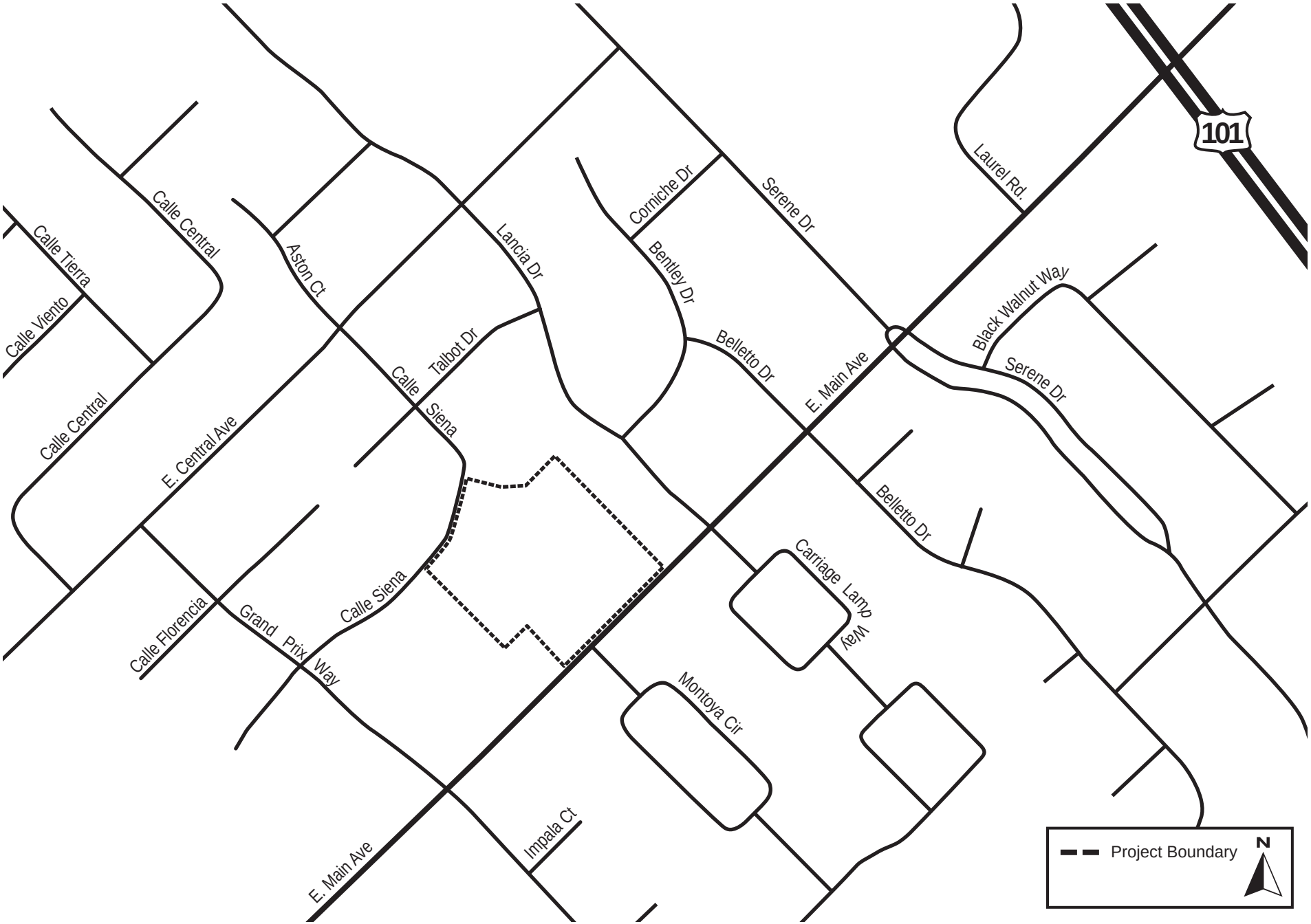
2.6 GENERAL PLAN DESIGNATION AND ZONING DISTRICT

Existing General Plan Designation:	Single-Family Medium (3-5 dwelling units per acre [du/ac])
Existing Zoning District:	R1-7000, Residential Planned Development (RPD)
Proposed Zoning:	R1-7000, RPD/Planned Development (PD)



REGIONAL MAP

FIGURE 2.2-1



VICINITY MAP

FIGURE 2.2-2

AERIAL MAP AND SURROUNDING LAND USES

FIGURE 2.2-3

SECTION 3 PROJECT DESCRIPTION

3.1 OVERVIEW

The 3.64-acre project site (APN 726-20-053) currently consists of two main areas: 1) a fenced undeveloped property that includes a very large mature coast live oak tree (248-inch trunk circumference), four additional coast live oaks trees, and a few small non-native trees, and 2) a public open space area that includes a paved pathway, picnic benches, a basketball court and non-native trees.

The 248-inch circumference coast live oak tree was pruned by the project applicant without the City's approval in August 2013 while the development application remained pending and the CEQA environmental review process was underway. The large, mature coast live oak remains part of the environmental baseline against which the proposed project's impacts are measured. Unauthorized pruning of a large tree limb (47 inches in circumference) resulted in 10 to 15 percent of total canopy loss, and represents an impact of the proposed project that has already been realized. Mitigation measures for the mature coast live oak to preserve the tree and ensure its viability are presented in Section 4.1 *Aesthetics*.

In April 2013, the City ministerially approved the demolition of the structures on the site. These structures included two residential structures (one primary residence and one secondary residence), a garage, a water tower, an active groundwater-supply well, and a well house. The site's structures were demolished in June 2013 and, therefore, are not considered part of the environmental baseline against which the proposed project's impacts are measured. The site also had approximately 175 non-native and native trees on the site and most of these trees were previously removed in accordance with City regulations.

3.2 PROJECT DESCRIPTION

The proposed project would allow for the subdivision and development of 12 residential lots and improvements to an existing open space area. Other proposed improvements include: new storm water facilities, sound walls and retaining walls, a new public street, sidewalks and landscaping. An easement within the public open space area will also be reserved for a public well site.[1]

The project will maintain the existing *Single-Family Medium (3-5 du/ac)* General Plan land use designation. The project site is currently zoned as R1-7000 RPD. The project proposes to amend the zoning by approving a precise development plan which will allow for deviations to the existing development standards. The deviations to the development standards include lot types (*R1-4,500* lots proposed), reduced setbacks, lot widths, and lot sizes which would otherwise be required to comply with under the *R1-7,000* zoning district. These exceptions are considered as part of the planned development to facilitate and promote coordination of design, access, and enhancement of the area in which the project is proposed.

The proposed site plan for the 12 new single-family residences (on 12 lots) and improvements to an open space non-building lot is shown on Figure 3.2-1. The mature coast live oak tree (248-inch trunk

[1] Any future construction related to the public well, will complete separate environmental subject to consideration by the City of Morgan Hill.

circumference) will remain on-site and will require long-term care (based on recommendations from a qualified arborist) by future residents of lots that are within the original tree canopy and drip line prior to the applicant's unauthorized August 2013 pruning. All trees that exist on-site in the open space area will remain. Any other trees that require removal for construction of the single-family residences will be replaced with City-approved trees.

The project proposes 12 single-family detached units that will be approximately between 2,400 square feet (s.f.), and 4,000 s.f. in size. All of the single-family residences will have private driveways that lead to two-car garages which will be accessed by a new public street. The project has obtained 12 building allocations (six [6] units for FY2013-14; six [6] units for FY2014-15) through the Residential Development Control System (RDCS) process.

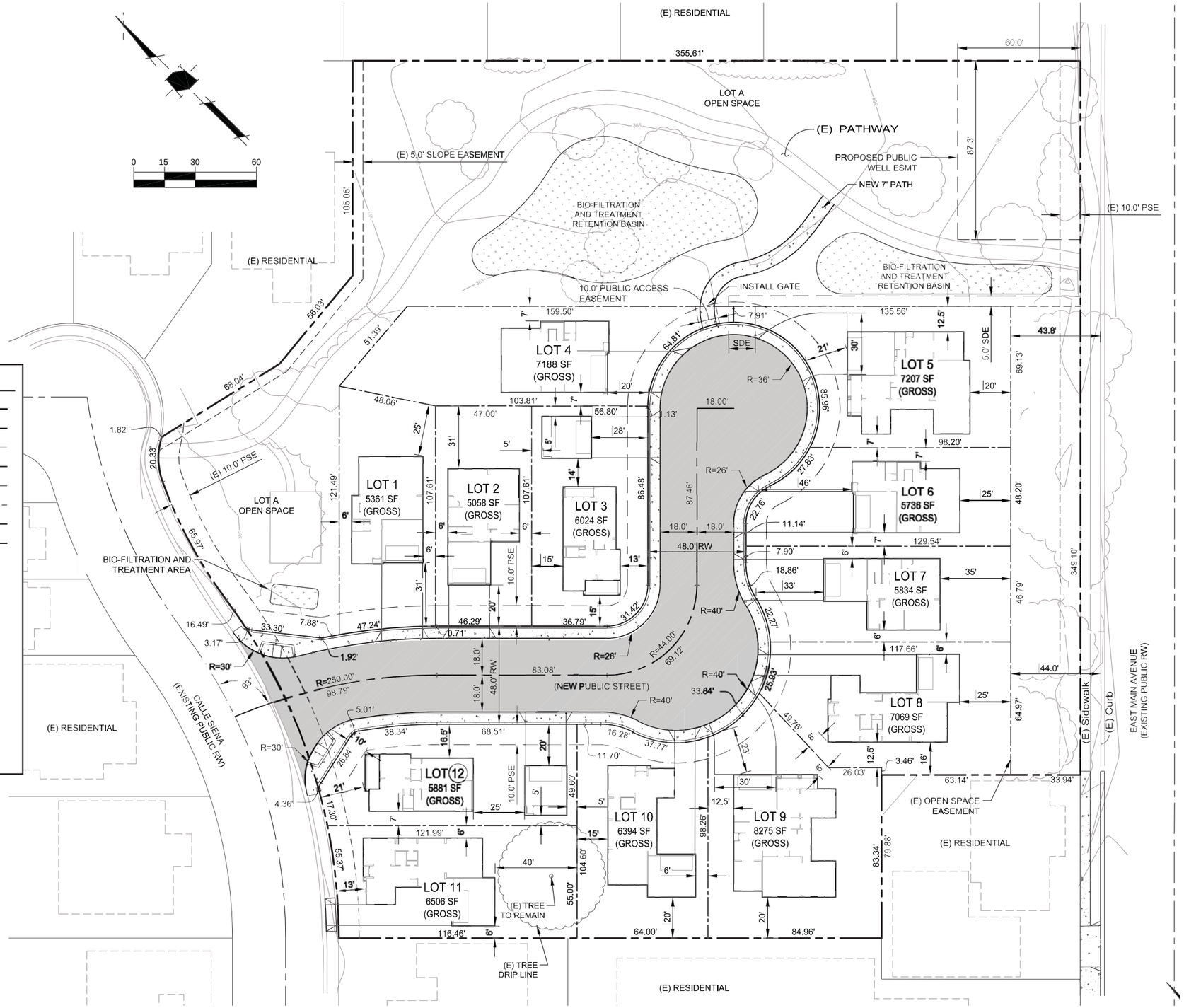
Improvements to the open space area will include a new concrete pathway to connect the new residential area to an existing pathway, storm water treatment and retention basins, and landscaping.

LOT SUMMARY				
LOT	PLAN	ELEVATION	LOT SIZE	FAR
1	3	C	5,361 SF	
2	1	A	5,058 SF	
** 3	2	A	6,024 SF	.41
4	3	C	7,188 SF	
5	5	C	7,207 SF	
6	3	A	5,736 SF	
7	1	B	5,834 SF	
8	4	A	7,069 SF	
9	5	A	8,275 SF	
10	4	B	6,394 SF	
11	4	A	6,506 SF	
**12	2	B	5,881 SF	.42

**NOTE: LOTS 3 & 12 ARE R1-4,500 LOTS.

LEGEND

EXISTING PROPERTY LINE	
PROPOSED LOT LINE	
EXISTING LOT LINE	
RIGHT-OF-WAY	
PROPOSED EASEMENT	
EXISTING EASEMENT	
CENTER LINE	
BUILDING SETBACK	
(E)	EXISTING
ESMT	EASEMENT
PSE	PUBLIC SERVICE EASEMENT
SDE	PUBLIC STORM DRAIN EASEMENT
RW	RIGHT-OF-WAY
NEW PUBLIC STREET	
NEW SWK	
BIO-FILTRATION TREATMENT AREA	



Source: HMH, Oct. 9 2013

SITE PLAN

FIGURE 3.2-1

SECTION 4 ENVIRONMENTAL CHECKLIST AND DISCUSSION OF IMPACTS

This section describes the existing environmental conditions on and near the project site, as well as environmental impacts associated with the proposed project. The environmental checklist, as recommended in the CEQA Guidelines, identifies environmental impacts that could occur if the proposed project is implemented. The right-hand column in the checklist lists the source(s) for the answer to each question. The sources cited are identified at the end of this section. Mitigation measures are identified for all significant project impacts. "Mitigation Measures" are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guideline 15370). Measures that are proposed by the applicant that will further reduce or avoid already less than significant impacts are categorized as "Standard Measures."

4.1 AESTHETICS

The discussion regarding on-site trees is based in part upon *A Review of the Trees at 605 E. Main* prepared in February, 2011, and *A Review of Pruning at 605 E. Main* prepared in August 2013 by Barrie D. Coate and Associates. These reports are attached to this Initial Study as Appendix A.

4.1.1 Setting

The approximately 3.64-acre project site is bordered by Calle Siena on the western boundary, East Main Avenue on the eastern site boundary, and single-family residential developments on the northern and southern boundaries.

The site consists of two main areas: 1) a fenced undeveloped property that includes five coast live oak trees and a few small non-native trees, and 2) a public open space area that includes a paved pathway, picnic benches, a basketball court and non-native trees (refer to Photos 1 and 2). One of the coast live oaks, located within the fenced undeveloped property, is approximately 76 feet in height and has a 248-inch trunk circumference (refer to Photo 3). The other four coast live oak trees range from 13 to 34 inches in trunk circumference. The fenced undeveloped property can be accessed by a graded driveway (on the site) off of East Main Avenue. There are non-native trees in the open space area and along the eastern boundary of the site fronting East Main Avenue (refer to Photo 4). The open space area can be accessed via a meandering paved pathway that connects Calle Siena and East Main Avenue.

The surrounding single-family residential developments are comprised of wood-framed one- to two-story structures with driveways, attached garages, and trees on their properties. These houses have facades made from varying combinations of wooden siding, stucco, and stone. The facades also consist of attached two-car garages and driveways that are accessed from City streets. East Main Avenue has two lanes (one in each direction) and bike lanes on both sides; Calle Siena is a two-way residential street with no bike lanes (refer to Photos 5 and 6). Views of the project site consist of abutting residences immediately to the north and south of the site, vehicle drivers on East Main Avenue, and residences immediately to the west of Calle Siena and immediately to the east of East Main Avenue.

Photo 1: Main-Glenrock property facing north.

Photo 2: The site's open space area facing west.

Photo 3: Mature coast live oak tree on the Main-Glenrock property.

Photo 4: Trees along eastern boundary of the property fronting East Main Avenue.

Photo 5: East Main Avenue facing the northeast direction.

Photo 6: Single-family attached units on Calle Siena, across the street from the site's open space, facing west.

4.1.2 Environmental Checklist and Discussion of Impacts

AESTHETICS					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
1) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐	1,2
2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☒	☐	☐	1,2,3,4
3) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐	1,2
4) Create a new source of substantial light or glare which will adversely affect day or nighttime views in the area?	☐	☐	☒	☐	1,2

4.1.2.1 Aesthetic Impacts

The project will allow for the development of 12 single-family houses and an improvements to an open space area. New storm water facilities, soundwalls and wood retaining walls, a new public street and sidewalks will be constructed on the residential lots; a new concrete pathway that connects the proposed residential development to an existing concrete pathway in the open space area will be constructed. Storm water treatment and retention basins will also be constructed on the open space area.

The project proposes 12 single-family detached units that will be approximately between 2,400 s.f. and 4,000 s.f. in size. All of the single-family residences will have private driveways that lead to two-car garages which will be accessed by a public street.

The residential structures on-site will have a mix of elevations and rooflines, and staggered setbacks from the streets. The structures will have facades made from varying combinations of stucco, stone veneer, shingle-pattern siding, horizontal-lap siding, and smooth-panel siding. The structures will be detailed with concrete roofing, vinyl-framed windows and wood-framed columns. The proposed units will have a maximum height of approximately 31 feet, and will be similar in height to the existing two-story residences in the neighborhood.

While the project will change the visual character of the site by allowing construction of 12 residential buildings, the proposed structures will use a variety of facade materials and will include two-story structures, which is consistent with the scale and character of the existing neighborhoods in the area. The residential developments will fit in with the character of the existing residential neighborhoods and will not degrade the existing visual character of the site or its surroundings. **(Less Than Significant Impact)**

4.1.2.2 Visual Intrusion

The site is located in an area with existing residential development. The project will place a new residential development on the site, adjacent to existing suburban residential development. Suburban environments typically consist of properties that are proximate to each other and complete privacy is not typical or expected. The project is typical of urban infill development and will not degrade the visual quality of the area. **(Less Than Significant Impact)**

4.1.2.3 Light and Glare

Residential development at the site will incrementally increase light and glare due to the new building surfaces, vehicles traveling to and from the development, and lighted buildings and streets. The light and glare created by the project's residential development will be consistent with the levels of light and glare currently emitted by the surrounding residential development, will be typical of a suburban area, and is not considered substantial. Implementation of the project will not, therefore, result in significant new sources of light or glare. **(Less Than Significant Impact)**

4.1.2.4 Shade and Shadow Impacts

In a suburban environment, virtually all land uses are subject to shading from adjacent properties to some extent. In the summertime, shading can even be desirable. Maximum shading occurs on December 21st during the winter solstice when the sun is at the lowest angle above the horizon. Shade or shadow impacts can occur when a building or other structure substantially reduces natural sunlight on private or public open spaces.

Throughout the cycle of each day, shadows move from a northwesterly to a northeasterly direction. Residences that will be constructed on the northern section of the site will be adjacent to the open space area (adjacent to proposed residences on Lots 4 and 5) and East Main Avenue (adjacent to proposed residence on Lot 5). Since existing residences do not occur immediately adjacent to the project's proposed residences on the northern end of the site, shading from the proposed residences on existing adjacent residences will be minimal.

The project will not be out of scale with surrounding development. The project will construct single-family residential buildings adjacent to other existing one- to two-story single-family buildings in a suburban environment where it is typical for houses to be located in proximity to one another. Shadows that will result from the project are expected to occur in a residentially zoned neighborhood. There are no public open spaces in the vicinity of the project site that will be affected by shadows from the project. For these reasons, the project will not result in significant shade or shadow impacts. **(Less Than Significant Impact)**

4.1.2.5 Scenic Resources

The project site is not designated as a scenic resource, nor are there designated scenic vistas in the vicinity of the site. The site is not located within a state scenic highway and is not located in the vicinity of a designated scenic corridor.[2]

Native coast live oak trees with trunk circumferences at or greater than 18 inches and non-native trees with trunk circumferences above 40 inches are designated as significant (per the City's Municipal Code 12.32.020) and are considered scenic resources. The coast live oak tree with a 248-inch trunk circumference will remain on-site. As mentioned in Section 3 *Project Description*, this mature coast live oak tree was pruned by the project applicant without City's approval in August 2013 while the development application remained pending and the CEQA environmental review process was underway. Pruning of a large tree limb (47 inches in circumference) resulted in 10 to 15 percent of total canopy loss. Of the four remaining coast live oak trees on the site, three of the trees are over 18 inches in trunk circumference (18 to 34 inches in trunk circumference) and, therefore, are considered scenic resources. It is likely that all four of these trees will require removal due to project design.

Impact AES-1 Implementation of the project could result in the loss of City-protected trees which are considered scenic resources. **(Significant Impact)**

Mitigation Measure: The following measures shall be implemented to mitigate significant impacts to scenic resources (trees) to a less than significant level:

MM AES-1.1 Trees that are acceptable to the City's Community Development Director will be planted on the site to compensate for the loss of the City's significant native trees. Native trees will be planted to compensate for the loss of the removed native trees at a two to one ratio or the removed native trees shall be transplanted to the open space area on-site.

MM AES-1.2 The following measures apply to the mature coast live oak tree with a 248-inch trunk circumference which includes the entire drip line area of the tree:

- To reduce the risk of disease and insect infestation to the coast live oak tree in the areas where the tree was pruned, the remaining stubs (of the branches that were removed in August 2013) will be removed.
- After removal of the stubs, the tree shall be irrigated for the next 2-3 months (only if any of the months receive less than one inch of rainfall). Irrigate of a minimum of five (5) gallons for each trunk diameter every two weeks. A soaker hose or drip line will be used for the irrigation.
- The entire area within the drip line of this tree will be mulched. Mulching consists of a protective material (wood chips) spread over the root zone inside the drip line. This material must be four (4) inches in depth after

[2] California Department of Transportation. California Scenic Highway Program. Scenic Highway Routes. Last Updated April 2012. Available at: < http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm>. Accessed March 27, 2013.

spreading, which must be done by hand. The wood chips will be primarily ¼ to ¾ inch in diameter.

- To provide structural support for the various limbs of the coast live oak tree and prevent them from breaking out in the foreseeable future, the following measures shall be implemented by an ISA-certified arborist:
  - A support post composed of a six-inch diameter steel post will be installed at approximately 10 feet east of the western fence line at the point where two branches separate from the main limb. This post will be buried in at least one cubic yard of concrete in a hole that is at least three feet deep and two feet wide.
  - Two box cable systems will be installed between each of the remaining structural limbs. For the first cable system, one cable will be installed into the east-facing main limb at about 20 feet above the point where that limb diverts from the main trunk. The cable will then be installed from the east-facing limb to the south-facing limb; from there, the cable will be installed on the north-facing limb and then back to the east facing limb.
  - A second set of cables will be installed at three to four feet below the first set of cables.
- The following activities must not occur under the canopy of the coast live oak tree:
  - Trenching for utilities,
  - lawn installation,
  - soil tilling, and
  - sprinkler installation.
- Only plants that need drip irrigation once per month or less can be installed near the tree and must be at least 20 feet from the trunk in every direction. Plants that require sprinklers will not be planted near the tree.
- Under no circumstances will frequent or excessive thinning be permitted. Any necessary future pruning decisions must be completed by an ISA-certified arborist. **(Less Than Significant Impact with Mitigation)**

4.1.3 Conclusion

The project will have a less than significant impact on the visual character of the project area. The project will not create significant additional sources of light or glare and will not result in significant shade or shadow impacts. With implementation of the above mitigation measures, the project will have a less than significant impact on scenic resources. The project will not result in significant visual impacts. **(Less Than Significant Impact with Mitigation)**

4.2 AGRICULTURAL AND FOREST RESOURCES

4.2.1 Setting

The Santa Clara County Important Farmland 2010 Map designates the project site as *Urban and Built-Up Land* which is defined as land that is occupied by structures with a building density off at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel.[3] The site is currently undeveloped and is not currently used for agricultural purposes. The site was occupied by orchards and three structures (primary residence, water tower and garage) and a water tank from 1939 to 1965. By 1965, the secondary residence occurred on-site and the site was no longer occupied by orchards; therefore, the site has not likely been used for agricultural purposes since 1965.

The project site is not subject to a Williamson Act contract, nor has either site been used for agricultural purposes, based on historical records. The project site is not a forest resource, nor are there forest resources in their surrounding areas. There are no agricultural or forest land uses located adjacent to the project site.

4.2.2 Environmental Checklist and Discussion of Impacts

AGRICULTURAL AND FOREST RESOURCES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒	1,2,5,6
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	1,2,5
3) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒	1,2,5
4) Result in a loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒	1,2,5,6

[3] California Department of Conservation. *Santa Clara County Important Farmland 2010.* 2011. Available at: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/scl10.pdf>. Accessed March 14, 2013.

AGRICULTURAL AND FOREST RESOURCES					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project: 5) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒	1,2,5,6

4.2.2.1 *Impacts from the Proposed Project*

The site is currently designated as *Urban and Built-Up Land* by the California Department of Conservation's Farmland Mapping and Monitoring Program. The City has zoned the project site as *R1-7000 RPD,* which does not include agriculture as a permitted or conditionally permitted land use. Implementation of the project will allow for the construction of 12 single-family houses and improvements to an open space area.

The project will not conflict with existing zoning for agricultural use or a Williamson Act contract. The site is not adjacent to other farmland and the proposed developments will not interfere with other agricultural operations or facilitate the conversion of farmland elsewhere in the Morgan Hill area to non-agricultural uses. The project site is not a forest resource, nor are there forest lands in its vicinity. For these reasons, the project will not impact agricultural or forest resources. **(No Impact)**

4.2.3 **Conclusion**

The project will not result in a significant impact to agricultural or forest resources. **(No Impact)**

4.3 AIR QUALITY

This section discusses potential air quality impacts from the project during and post-construction, and includes a toxic air contaminant (TAC) health risk assessment of the project's construction activities. The health risk assessment is in part based on the *TAC Construction Risk Assessment* completed by Illingworth & Rodkin, Inc. in April 2013. A copy of this report is provided in Appendix B.

4.3.1 Setting

4.3.1.1 *Regional Air Quality*

Air quality and the amount of a given pollutant in the atmosphere are determined by the amount of pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determination of transport and dilution are wind, atmospheric stability, terrain, and for photochemical pollutants, and sunlight.

The project site is within the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the state and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$). The Bay Area Air Quality Management District (BAAQMD) is the regional government agency that monitors and regulates air pollution within the air basin. The California Air Resources Board (CARB), which is part of the California Environmental Protection Agency, oversees regional air district activities and regulates air quality at the state level.

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_x). These precursors react under certain meteorological conditions to form high ozone levels. Managing these precursor pollutants is the focus of the Bay Area's attempt to reduce ozone levels. High ozone levels aggravate respiratory and cardiovascular diseases, reduce lung function, and increase coughing and chest discomfort.

PM_{10} is assessed and measured in terms of respirable particulate matter, or particles that have a diameter 10 micrometers or less and $PM_{2.5}$ (fine particulate matter) consists of particles with a diameter of 2.5 micrometers or less. Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality, and result in reduced lung function growth in children.

As part of an effort to attain and maintain ambient air quality standards for ozone, PM_{10}, and $PM_{2.5}$ BAAQMD has established thresholds of significance for precursor air pollutants. BAAQMD thresholds of significance were adopted in June 2010 and updated in May 2011. These thresholds are for ozone precursor pollutants (ROG and NO_x), PM_{10}, and $PM_{2.5}$. A project that generates more than 10 tons per year or 54 pounds per day of ROG, NO_x, or $PM_{2.5}$, or more than 15 tons per year or 82 pounds per day of PM_{10} is considered to have a significant operational and/or construction-related air quality impact, according to the BAAQMD thresholds of significance (May 2010). The Bay Area has attained carbon monoxide standards.

Due to a recent Superior Court case ruling in Alameda County (*California Building Industry Association versus BAAQMD Case No. RG10548693*), BAAQMD was required to cease dissemination of the CEQA Air Quality Guidelines, pending review of the Guidelines under CEQA. BAAQMD has appealed this ruling. Ultimately, the thresholds of significance used to evaluate the proposed developments are determined by the Lead Agency, the City of Morgan Hill. Per CEQA Guidelines Section 15064.7, the City has elected to use the thresholds and methodology included in the May 2011 BAAQMD Air Quality Guidelines, as they are based on substantial evidence and remain the most up-to-date, scientifically-based method available to evaluate air quality impacts.

4.3.1.2 *Local Air Quality*

In addition to the criteria/precursor pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different TACs. Exposure to TACs can result from emissions from normal operations (i.e., vehicle operations), as well as accidental releases. Health effects of TACs include cancer, birth defects, neurological damage and death.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the CARB, diesel exhaust is a complex mixture of gases, vapors and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the state's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

The BAAQMD adopted thresholds of significance for local community risk and hazard impacts apply to both the siting of a new source and to the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and $PM_{2.5}$ because emissions of these pollutants can have significant health impacts at the local level. If emissions of TACs or $PM_{2.5}$ exceed any of the thresholds of significance listed below, the proposed project will result in a significant impact:

- Non-compliance with a qualified risk reduction plan; or,
- An excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0 will be a cumulatively considerable contribution;
- An incremental increase of greater than 0.3 micrograms per cubic meter ($\mu g/m^3$) annual average $PM_{2.5}$ will be a cumulatively considerable contribution.

The BAAQMD *CEQA Air Quality Guidelines* require that projects be evaluated for community risk when they are located within 1,000 feet of freeways, high traffic volume roadways (10,000 average annual daily trips or more), and/or stationary permitted sources of TACs.

The BAAQMD developed the Stationary Source Screening Analysis Tool which maps the locations of stationary permitted sources of TACs in the Bay Area. The BAAQMD screening tool does not show any stationary permitted TAC sources within 1,000 feet of the project site. East Main Avenue,

which has approximately 9,300 average daily trips (ADT),[4] is the only major roadway within 1,000 feet of the project site. The ADT on East Main Avenue is below the BAAQMD threshold (10,000 ADT) and the project is not located within 1,000 feet of a highway. For these reasons, a formal community risk TAC analysis is not required for the impacts of the surrounding TAC sources on the project. A community health risk assessment was completed, however, to assess the impacts of TAC emissions from the project's construction activities on sensitive receptors, (i.e. adjacent residences).

4.3.1.3 *Odors*

Common sources of odors include wastewater treatment plants, transfer stations, coffee roasters, painting/coating operations, etc. Table 3-3 in the BAAQMD CEQA Guidelines has a list of common odor sources (i.e., wastewater treatment plant, food processing facility, chemical manufacturing) with associated screening distances. Projects that place a new sensitive receptor farther than the applicable screening distance from an existing odor source will not likely result in a significant odor impact.

There are no observed odor sources within one mile (lowest BAAQMD project screening distance) of the site. The City of Morgan Hill, however, is surrounded by rural, unincorporated lands which allow for agricultural operations that can produce a variety of odors. Some odors from agricultural operations do exist in the City; however, these odors are sporadic throughout the year.

4.3.1.4 *Sensitive Receptors*

BAAQMD defines sensitive receptors as population groups that are particularly sensitive to the effects of air pollutants (i.e., children, the elderly, and people with illnesses). Places where sensitive receptors are likely to be located include schools, hospitals, and residential areas. For cancer risk assessments, children are the most sensitive receptors, as they are more susceptible to cancer causing TACs. Residential developments are assumed to include infants and small children. Sensitive receptors in the immediate project area include residential developments surrounding the site in all directions.

4.3.2 Environmental Checklist and Discussion of Impacts

AIR QUALITY					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
1) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒	1,2,7
2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐	1,2,7,8

[4] California Environmental Health Investigations Branch. *CEHTP Traffic Linkage Service Demonstration*. 2007. Available at: < http://www.ehib.org/traffic_tool.jsp>. Accessed on May 1, 2013.

AIR QUALITY					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard including releasing emissions which exceed quantitative thresholds for ozone precursors?	☐	☐	☒	☐	1,2,8,9
4) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐	1,2,8,9
5) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐	1,8

4.3.2.1 *Impacts from the Project*

Consistency with Applicable Air Quality Plan

The most recent clean air plan is the *Bay Area 2010 Clean Air Plan* that was adopted by BAAQMD in September 2010. The project would not conflict with the latest Clean Air planning efforts since; (1) the project will have emissions well below the BAAQMD thresholds as described above; (2) development of the project site would be considered urban "infill"; (3) development will occur near employment centers; and (4) development will be in proximity to existing transit with regional connections. **(Less Than Significant Impact)**

Long-Term Air Quality Impacts

As previously described, a project that generates more than 10 tons per year or 54 pounds per day of ROG, NO_x, or $PM_{2.5}$, or more than 15 tons per year or 82 pounds per day of PM_{10} is considered to have a significant operational and/or construction-related air quality impact, according to the BAAQMD thresholds of significance (May 2011). To aid in determining the point at which a project exceeds these thresholds, BAAQMD developed a screening table that indicates the size at which a project could be potentially significant.

The proposed project will construct 12 single-family residential units. The BAAQMD screening table shows that operation of a residential development results in ROG and NO_x exceeding their respective thresholds before $PM_{2.5}$ or $PM_{10.}$ The BAAQMD screening level for operational emissions related to a single-family residential development is 325 dwelling units (at which point NO_X may exceed the 10 tons per year or 54 pounds per day threshold). The project, which is substantially smaller than the screening levels established in the BAAQMD CEQA guidelines, will not result in significant long-term air quality impacts or result in a cumulatively considerable net increase of criteria pollutants for which the region is classified as non-attainment.
(Less Than Significant Impact)

Local Air Pollutants - Carbon Monoxide from Project Traffic

As discussed above, the project will have emissions less than the thresholds adopted by BAAQMD which are used to evaluate impacts to ozone and particulate matter. Therefore, the project would not contribute substantially to existing or projected violations of those standards. Carbon monoxide emissions from traffic generated by the project would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of carbon monoxide. Air pollutant monitoring data indicate that carbon monoxide levels have been at healthy levels (i.e., below state and federal standards) in the Bay Area since the early 1990s. As a result, the region has been designated as attainment for the carbon monoxide standard (below 9.0 parts per million [ppm] over an 8-hour period and 20 ppm over 24-hour period for California standards[5]). There is an ambient air quality monitoring station in San Jose that measures carbon monoxide concentrations. The project would generate a small amount of traffic (approximately one peak hour trip per unit); therefore, the contribution of project-generated traffic to these levels would be minimal. The project would not cause or contribute to a violation of an ambient air quality standard. **(Less Than Significant Impact)**

Short-Term Air Quality Impacts

Construction Exhaust

The BAAQMD has adopted screening level thresholds for daily criteria pollutant emissions related to construction. The BAAQMD screening table shows that construction of a residential development results in ROG exceeding its respective threshold before NO_x, $PM_{2.5}$ or PM_{10}. The BAAQMD screening level for emissions related to construction of a single-family residential project is 114 dwelling units (at which point ROG may exceed the 10 tons per year or 54 pounds per day threshold). Given the proposed project is smaller than the screening thresholds, project construction activities will not generate significant amounts of criteria/precursor air pollutants that will impact sensitive receptors or temporarily increase local pollutant levels. The project will not, therefore, result in significant short-term air quality impacts related to construction exhaust.
(Less Than Significant Impact)

Fugitive Dust Emissions

Construction activity is anticipated to include grading, building construction, paving and application of architectural coatings. During grading and excavations activities, dust will be generated. Most of the dust will result during grading activities. The amount of dust generated will be highly variable and is dependent on the size of the area disturbed at any given time, amount of activity, soil conditions and meteorological conditions. Typical winds during late spring through summer are from the north. Nearby land uses, especially those residences located immediately to the northwest boundary of the project site could be adversely affected by dust generated during construction activities. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are employed to reduce these emissions. If left uncontrolled, dust generated by construction activities could be a significant impact.

[5] BAAQMD. *Air Quality Standards and Attainment Status*. Available at: <http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm>. Accessed March 6, 2013.

Impact AIR-1 Construction-generated dust, if uncontrolled, could result in a short-term significant air quality impact. **(Significant Impact)**

Mitigation Measures: The project includes the following mitigation measure to reduce project construction dust impacts to a less than significant level:

MM AIR-1.1 Implementation of the mitigation measures recommended by BAAQMD and listed below will reduce the air quality impacts associated with grading and new construction to a less than significant. In addition, these measures will reduce on-site equipment exhaust emissions. The lower emissions will reduce health risk impacts to existing residences that are nearby. The following construction practices shall be implemented during construction of the proposed project:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Avoid staging construction equipment adjacent to existing residences or sensitive receptors.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations. **(Less Than Significant Impact with Mitigation)**

Toxic Air Contaminants and Risk to Sensitive Receptors

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. As indicated previously, these exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. There are residential units located immediately adjacent to the northern and southern boundaries of the project site, as well as residences to the west of Calle Siena and to the east of East Main Avenue that could be exposed to substantial amounts of TACs on a temporary basis.

BAAQMD CEQA TAC Thresholds

The BAAQMD CEQA Air Quality Guidelines considers exposure of sensitive receptors to air pollutant levels that result in an unacceptable cancer risk or hazard to be significant. For cancer risk the BAAQMD considers an increased risk of contracting cancer that is 10 in one million chances or greater to be significant for a single source. For cumulative exposure to TACs from existing sources affecting a sensitive receptor, in addition to a proposed new source, the BAAQMD considers an increased risk of contracting cancer that is 100 in one million chances or greater to be significant. The BAAQMD CEQA Guidelines also consider exposure to annual $PM_{2.5}$ concentrations that exceed 0.3 micrograms per cubic meter ($\mu g/m^3$) from a single source to be significant and an annual $PM_{2.5}$ concentration that exceeds 0.8 $\mu g/m^3$ from cumulative sources to be significant.

Diesel Particulate Matter ($PM_{2.5}$) Results from Modeling

Existing residences are located immediately adjacent to the project; therefore, a health risk assessment of the construction activity was completed to evaluate emissions of diesel particulate matter (DPM). Emissions and dispersion modeling was completed to predict the off-site concentrations resulting from project construction, so that lifetime cancer risks and chronic hazards could be predicted.

Construction period emissions were estimated using the California Emissions Estimator Model, Version 2011.1.1 (CalEEMod) along with projected construction activity. Construction of the project is expected to occur over an approximate 15 month period during 2013 and 2014. The CalEEMod model estimated the total annual $PM_{2.5}$ exhaust emissions (assumed to be DPM) for the off- road construction equipment used for project construction and for the exhaust emissions from on-road vehicles (haul trucks, vendor trucks, and worker vehicles) to be 0.04 tons for the overall construction period. The on-road emissions are a result of on-road haul truck travel during demolition and grading activities and vendor deliveries during construction, with overall trip lengths of 20 miles for haul trucks and 7.3 miles for vendor trips.

The U.S. EPA ISCST3 dispersion model was used to estimate concentrations of DPM for existing sensitive receptors in the vicinity of the project site. The ISCST3 dispersion model is a BAAQMD recommended model for use in refined modeling analysis of CEQA projects. The ISCST3 modeling utilized one area source to represent the on-site construction emissions. An emission release height of 6 meters (20 feet) was used for the area source. The elevated source height reflects the height of the equipment exhaust pipes and buoyancy of the exhaust plume. All of the emissions from the construction equipment and on-road vehicle travel were included in the area source. Emissions were

modeled as occurring daily between 7 AM to 4 PM. The model used a 5-year data set (2001-2005) of hourly meteorological data from the San Martin Airport available from BAAQMD. Long-term annual DPM concentrations from construction activities were predicted for the construction period based on the 5 years of meteorological data. DPM concentrations were calculated at nearby sensitive receptors at a height of 1.8 meters (6 feet).

The maximum-modeled DPM concentration (in the form of $PM_{2.5}$ exhaust) occurred at a residence adjacent to the northern boundary of the project site. The modeled maximum annual $PM_{2.5}$ concentration was 0.11 micrograms per cubic meter ($\mu g/m^3$), which is below the BAAQMD threshold of 0.3 $\mu g/m^3$ for $PM_{2.5}$. **(Less Than Significant Impact)**

Excess Lifetime Cancer Risk

Increased cancer risks were calculated using the maximum modeled annual DPM concentration and BAAQMD recommended risk assessment methods that include both child exposures (third trimester through two years of age) and adult exposures. Infant and child exposures were assumed to occur at residences throughout the entire construction period. Since the modeling was conducted assuming emissions occur over a full year, the default BAAQMD exposure period of 350 days per year was used.

Results of this assessment indicate that the maximum residential child cancer risk is 9.3 in one million and the maximum residential adult cancer risk is 0.5 in one million. These cancer risks are below the BAAQMD's threshold of 10 excess cancer cases per million used for evaluating cancer risk. **(Less Than Significant Impact)**

Non-Cancer Health Hazards

Potential non-cancer health effects due to chronic exposure to DPM were also evaluated. The chronic inhalation reference exposure level (REL) for DPM is 5 µg/m3. The maximum predicted annual DPM concentration is 0.11 $\mu g/m^3$, which is much lower than the REL. The Hazard Index (HI), which is the ratio of the annual DPM concentration to the REL, is 0.02. This HI is much lower than the BAAQMD significance criterion of a HI greater than 1.0. **(Less Than Significant Impact)**

4.3.2.3 *Impacts to the Project*

As described previously, the BAAQMD CEQA Air Quality Guidelines requires that projects be evaluated for community risk when they are located within 1,000 feet of freeways, high traffic volume roadways (10,000 average annual daily trips or more), and/or stationary permitted sources of TACs.

Stationary sources of TAC emissions were identified using the BAAQMD Stationary Source Screening Analysis Tool.[6] Stationary sources affecting the project site were not identified within

[6] BAAQMD Stationary Source Screening Analysis Tool. Last Modified August 2012. Available at: <*http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx*>. Accessed March 25, 2013.

1,000 feet of the site. There are also no high traffic volume roadways that have 10,000 or more ADT within 1,000 feet of the project site; therefore there are no significant mobile TAC sources.

4.3.2.2 *Cumulative TAC Sources*

There are no known pending projects adjacent to the project site. As a result, the cumulative exposure of sensitive receptors to TACs shall not exceed the BAAQMD thresholds (increased risk of contracting cancer that is 100 in one million chances or greater or annual $PM_{2.5}$ concentrations that exceed 0.8 $\mu g/m^3$ from cumulative sources). **(Less Than Significant Impact)**

4.3.2.3 *Odors*

During construction, the project will generate localized emissions of diesel exhaust during equipment operation and truck activity. These emissions may be noticeable from time to time by adjacent receptors. The emissions would be localized, however, and are not likely to adversely affect people off site in that they will not result in confirmed odor complaints. The project site is not affected by existing odor sources that will cause odor complaints from new residents.
(Less Than Significant Impact)

4.3.3 Conclusion

The proposed project will not result in significant long-term regional or local air quality impacts. Short-term air quality impacts associated with construction will be reduced to less than significant levels with the implementation of the mitigation measure listed above. The project is small enough and located in an infill site near job center and urban services such that it will not obstruct the *Bay Area 2010 Clean Air Plan,* and it will not violate any air quality standard.
(Less Than Significant Impact with Mitigation)

4.4 BIOLOGICAL RESOURCES

This section discusses the biological resources or potential biological resources that could occur on-site. Potential impacts to these resources and mitigation measures are also discussed.

4.4.1 Setting

The project site is approximately 3.64 acres in size. The property is relatively flat with an elevation of approximately 365 feet above mean sea level (msl).[7] Most of the site was previously used as a farm and was occupied by orchards, a chicken coop, primary residence, and a water tower from 1939 until at least 1960. A greenhouse was on-site and was used to cultivate carnations from the 1970s until at least 2005. The site is currently vacant with landscaping and an open space area. The site is not adjacent to any creeks or wetlands. Because of its suburban setting and isolation from larger areas of undeveloped lands, the site does not function as a movement corridor for local wildlife.

4.4.1.1 *On-site Habitats*

Vegetation

The project site now supports non-native annual grassland, most of which comprises introduced (non-native) annual grassland. Common grassland in the City of Morgan Hill include ruderal forbs, primarily Italian rye grass and ripgut brome. Other species found in the area include yellow star thistle, filago, field mustard, and occasional storksbill.

There are several trees on-site that occur in the open space area and along the eastern border of the site fronting East Main Avenue. The site also features a mature coast live oak tree (248-inch trunk circumference) that is approximately 20 feet north of the southwestern boundary of the site.

Wildlife

Common wildlife species that inhabit grasslands along the fringe of urban development occur on the project site. California ground squirrel burrows can provide retreat locations for several species such as western fence lizards in the otherwise open habitat. The trees on-site could provide nesting and foraging sites for a variety of bird species. Common wildlife species expected to inhabit the site include the western fence lizard, mourning dove, American crow, northern mockingbird, house finch, lesser goldfinch, cat, and Botta's pocket gophers.

[7] Google Earth. January 2013.

4.4.1.2 *Regulatory Overview*

Migratory Birds

The Federal Migratory Bird Treaty Act (MBTA) prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. The trustee agency that addresses issues related to the MBTA is the US Fish and Wildlife Service (USFWS). Species of birds protected under the MBTA include all native birds and certain game birds. The MBTA protects whole birds, parts of birds, bird eggs, and nests and prohibits the possession of all nests of protected bird species whether they are active or inactive. An active nest is defined as having eggs or young. Birds protected by the MBTA may be present in the grassland habitat and/or in any of the eight oak trees located on the project site.

Birds of Prey

Birds of prey are protected in California under provisions of the State Fish and Game Wildlife Code, Section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the California Department of Fish and Wildlife.

Local Plans and Policies

Santa Clara Valley Habitat Plan/Natural Communities Conservation Plan

The project site is located within the Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP) area. The HCP/NCCP was developed by the County of Santa Clara, the Cities of San Jose, Gilroy and Morgan Hill, the Santa Clara Valley Water District, and the Santa Clara Valley Transportation Authority (collectively the "local partners") under the guidance of the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife (CDFW). The HCP/NCCP provides 'take' authorization (per the Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA)) for 18 listed and non-listed species (i.e. covered species). The HCP/NCCP also includes conservation measures to protect all 18 species and a conservation strategy designed to mitigate impacts on covered species and to contribute to the recovery of these species in the study area.

City of Morgan Hill Tree Removal Controls

The City of Morgan Hill defines a tree as "any live woody plant rising above the ground with a single stem or trunk of a circumference of 40 inches or more for non-indigenous species, and 18 inches or more for indigenous species measured at four and one-half feet vertically above the ground or immediately below the lowest branch, whichever is lower." Trees which are indigenous to the City include all types of oak trees, madrones, sycamore, alder and California bays. All commercial tree

farms, non-indigenous tree species in residential zones and orchards (including individual fruit trees) are exempted from the definition of a significant tree (Municipal Code 12.32.020 (G)).

Prior to the removal of any tree protected under the City of Morgan Hill Tree Removal Controls, a tree removal permit is required from the Community Development Director which includes a description of the tree replacement program and identification of any conditions imposed by the City.

The four of the coast live oak trees meet the City's definition of native significant trees, as their trunk circumferences are greater than 18 inches.

4.4.1.3 *Special-Status Species*

Regulatory Overview

The CEQA requires assessment of the effects of a project on species that are protected by State, Federal, or local governments as "threatened, rare, or endangered"; such species are typically described as "special-status species." Special-status species include those plant and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA). These acts afford protection to both listed and proposed species. Although CDFW Species of Special Concern generally have no protected legal status, they are given special consideration under CEQA. In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected under the MBTA (described above). Plant species on the California Native Plant Society (CNPS) Lists 1 and 2 are also considered special-status species and must be considered under CEQA.

4.4.2 Environmental Checklist and Discussion of Impacts

BIOLOGICAL RESOURCES					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project: 1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐	1,10

BIOLOGICAL RESOURCES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐	1,10
3) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒	1
4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, impede the use of native wildlife nursery sites?	☐	☐	☒	☐	1
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐	1,2,3, 10,11
6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒	1,10

4.4.2.1 *Impacts to Habitat*

There are no sensitive habitats on the project site, including areas of high biological diversity, areas providing important wildlife habitat, or unusual or regionally restricted habitat types at the project site. Redevelopment of the site with 12 single-family homes will not affect a federally protected wetland nor have a substantial adverse effect on any riparian habitat or other sensitive natural community. **(Less Than Significant Impact)**

Under the HCP/NCCP, the project is considered a private development 'covered activity' occurring in an Urban Development/Private Development Area. The HCP/NCCP has classified the land cover type as "Urban Parks and Urban/Suburban".[8] The HCP/NCCP assumes a certain amount of urban development within the City of Morgan Hill and HCP/NCCP plan area which have both permanent,

[8] According to the Santa Clara Valley HCP/NCCP "Geobrowser" (http://www.hcpmaps.com/habitat/) accessed in November 2013.

direct impacts and indirect impacts. Although, the private development activity will permanently alter the land, the project's land cover type as identified in the plan is not considered habitat where covered species and plants are known to occur or would likely occur in the future. The project area is also not within a defined wetland area, area with serpentine soils, or area considered to be high quality Burrowing Owl habitat, all of which are more likely to have direct and/ indirect impacts to covered species. The project is not within a planned Priority Reserve Area or within an Urban Reserve System Interface Zones.

The HCP/NCCP also considers covered activities to result in a certain amount of indirect impacts from urban development mostly in the form of increased impervious surface and from the effects of nitrogen deposition. Urban development results in increased air pollutant emissions from passenger and commercial vehicles and other industrial and nonindustrial sources. Emissions from these sources are known to increase airborne nitrogen, of which a certain amount is converted into forms that can fall to earth as depositional nitrogen. It has been shown that increased nitrogen in serpentine soils can favor the growth of nonnative annual grasses over native serpentine species and these nonnative species, if left unmanaged, can overtake the native serpentine species, which are host plants for larval Bay checkerspot butterfly. As such, all projects within the HCP/NCCP area are subject to paying a "Nitrogen Deposition Impact Fee" which will be calculated based on the number of daily vehicle trips attributed to the activity and collected prior to the commencement of the use.

In addition, all private development activities covered in the plan are subject to certain conditions of the HCP/NCCP (as identified in Chapter 6 of the Plan) based on the project's location and type of project. To ensure that the project complies with conditions of the HCP/NCCP, the conditions will be applied to the project as part of the entitlement approval conditions and/or other permits (i.e. building permits, building permits, etc).

The City of Morgan Hill has adopted the HCP/NCCP and approved an ordinance[9] implementing the measures and conditions set forth in the HCP/NCCP. Therefore, the project would have no impact regarding a conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan. **(No Impact)**

Grading and excavation activities during construction could expose soil to increased rates of erosion. Surface water runoff could remove particles of fill or excavated soil from the site, or could erode soil downgradient, if the flows are not controlled. Future development of the site will comply with best management practices (BMP's) approved in the Storm Water Pollution Prevention Plan (SWPPP), which is required as part of the project to reduce impacts to water quality in the area.
(Less Than Significant Impact)

[9] Chapter 18.69 of the City of Morgan Hill Municipal Code

4.4.2.2 *Impacts to Raptors and Other Nesting Birds*

Impacts to Raptors and Other Nesting Birds

The open grassland and trees on the site would provide suitable nesting and foraging habitat for raptor species and migratory birds likewise protected by the California Fish and Wildlife Code and/or the Federal Migratory Bird Treaty Act. The loss of this potential foraging and nesting habitat would be considered a less than significant impact since there is similar habitat in the region, and the loss of the small amount of trees and acres of grassland would constitute a small fraction of this type of habitat in the region.

Although the loss of habitat is not be considered significant, impacts to individuals would be considered significant. Breeding pairs could choose to breed or nest in the open grasslands, onsite trees, or in the nearby trees in the future. Project construction at the time of nesting (February 1st through August 31st) could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes abandonment and/or loss of reproductive effort is considered a taking by the CDFW. Any loss of fertile eggs, nesting raptors, or any activities resulting in nest abandonment would constitute a significant impact.

Impact BIO-1: Construction activities associated with residential development on the project site could result in the incidental loss of eggs or nestlings, either directly through the destruction or disturbance of active nests or indirectly by causing the abandonment of nests. **(Significant Impact)**

Mitigation Measures: Implementation of the following measures would protect eggs and nestlings from construction disturbances, and would ensure that the project is compliant with the MBTA and California Fish and Wildlife Code:

MM BIO-1.1 Construction shall be scheduled to avoid the nesting season to the extent feasible. If construction can be scheduled to occur between 1 September and 31 January (inclusive) to avoid the raptor and migratory bird nesting season, no impacts will be expected and no further mitigation for nesting birds is required.

MM BIO-1.2 If construction will take place between February and August, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests will be disturbed during project implementation. Surveys will be completed no more than seven (7) days prior to the initiation of site clearing or construction activities. During this survey, the ornithologist will inspect all trees and other potential nesting habitats (e.g., trees, shrubs, buildings) in and immediately adjacent to the impact areas for nests. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist will determine the extent of a disturbance-free buffer zone to be established around the nest (typically 250 feet for raptors and 50-100 feet for other species), to ensure that no nests of species protected by the Migratory Bird Treaty Act and California Fish and Wildlife Code will be disturbed during project implementation.

MM BIO-1.3: A report indicating the result of the survey and any designated buffer zones shall be submitted to the satisfaction of the Director of Community Development prior to the start of construction. **(Less Than Significant Impact with Mitigation)**

Western Burrowing Owl

No western burrowing owls are known to occur on the site. If a burrowing owl were to nest on the site, prior to the onset of construction, however, project construction activities could lead to the abandonment of active nests or direct mortality of these birds. Construction activities that adversely affect the nesting success or result in mortality of individual owls would be considered a significant impact.

Impact BIO-2 Development of the project site with residential land uses could result in the loss of burrowing owls and/or their habitat. **(Significant Impact)**

Mitigation Measures: The following mitigation measure shall be implemented to minimize potential adverse impacts on western burrowing owls:

MM BIO-2.1 In conformance with the City of Morgan Hill Burrowing Owl Habitat Mitigation Plan, the following will be implemented as part of the project to avoid direct impacts to burrowing owls and to offset impacts to their grassland habitat.

- Burrowing owl pre-construction surveys shall be completed to determine if burrowing owls are present within the footprint of the proposed grading area, no more than seven (7) days prior to the initiation of site clearing or construction activities.
- Should burrowing owls be found on the site during breeding season (February 1 through August 31), exclusion zones with a 250-foot radius from occupied burrows, shall be established. All project-related activities shall occur outside the exclusion area until the young have fledged.
- If pre-construction surveys are completed during the non-breeding season and burrowing owls are observed on the site, the owls may be relocated upon approval of the California Department of Fish and Wildlife once mitigation has been provided.
- A final report on burrowing owls, including any protection measures, shall be submitted to the Director of Community Development prior to grading. **(Less Than Significant Impact with Mitigation)**

4.4.2.3 *Impacts Related to Trees*

There are four coast live oak trees on the site that are considered significant under the City of Morgan Hill's Municipal Code. The coast live oak tree that has a trunk circumference of 248 inches will remain planted in its existing location. It is likely that the other four coast live oaks will be removed or transplanted due to construction of the proposed project. Per the City's Municipal Code 12.32.080, significant native trees that are not transplanted will be replaced at a two to one ratio by other trees that are indigenous to the City of Morgan Hill (refer to Section 4.1, *Aesthetics*). **(Less Than Significant Impact)**

4.4.3 Conclusion

Implementation of the project-specific mitigation measures will avoid or mitigate significant impacts to biological resources. **(Less Than Significant Impact with Mitigation)**

4.5 CULTURAL RESOURCES

The following discussion is based a *Historic Resource Assessment* completed for the site in March, 2012 by Circa. This report is attached to this Initial Study as Appendix C.

4.5.1 Setting

The site was a small family farm developed in 1912 which had a chicken coop, orchards, water tower and groundwater supply well. The site was a part of the "Old Homestead Tract" developed by Higgins Sterrett. The site is not designated as an archaeological sensitive area based on the City's *Archaeological Sensitivity Map*[10] and the *Summary of Recorded and Selected Potential Archaeological Sites*.[11] There is no evidence of either historic or prehistoric archaeological resources found on or adjacent to the project site.

The site was occupied by orchards, three structures (primary residence, water tower, and garage) and a large water tank from 1939 to 1956. Residences and associated outbuildings were immediately adjacent to the site on the northeast and southwest along East Main Avenue (a dirt road during this time). Orchards also occurred on all of the properties surrounding the project site until 1956 (orchards were removed southwest of the site). By 1965, orchards were removed from the project site and the second residence occurred north of the garage. East Main Avenue was a paved road and additional outbuildings existed on the property immediately northeast of the project site. By 1975, Highway 101 occurred east of the project site and orchards were no longer present on the surrounding properties and greenhouses were located on the northern section of the site. By 1982, residential developments were observed south of the site, and by 1993, additional development to the north, west, and east surrounded the site. No significant changes were observed on the project site from 1982 to 2005 based on historical records. By 2011, the greenhouses were no longer on the site. In June 2013, the remaining structures were removed from the site. These structures included two residential structures (one primary residence that was built in 1919 and the secondary residence that was built in 1965), one water tank tower (built in 1919), a garage (built in 1965), one groundwater supply well, and a well house.

Prior to the City's issuance of a demolition permit (ministerial permit) in April 2013, the buildings were evaluated by a qualified architectural historian. A historic resource assessment was completed for the primary residence and abutting shed, secondary residence, water tower, and garage. The structures were determined to be extensively deteriorated with poor physical integrity. The site does not fall within an important historical context of the City or meet the City's criteria (per Section 18.75 of the City's Municipal Code) for a historic resource; therefore, the site has had no historical structures of significance nor has it been associated with person(s) or events of importance to the history of California or City of Morgan Hill.

[10] City of Morgan Hill. *Archaeological Sensitivity Map*. April 2000.
[11] City of Morgan Hill. *Cultural Resources Supplement, Archaeological Resources: Morgan Hill General Plan*. April 2000.

4.5.2 Environmental Checklist and Discussion of Impacts

CULTURAL RESOURCES					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
1) Cause a substantial adverse change in the significance of an historical resource as defined in §15064.5?	☐	☐	☐	☒	1,2,12
2) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☒	☐	☐	1,2,13
3) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	☐	☐	☐	☒	1
4) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐	1

4.5.2.1 *Cultural Resources Impacts*

There are no known historic or prehistoric resources located on or adjacent to the site. There are also no recorded historic or prehistoric archaeological deposits on or adjacent to the site; the lack of prehistoric/historic resources in the general vicinity reconfirms the low cultural sensitivity of the project area. The site has no historical structures of significance nor is it associated with person(s) or events of importance to the history of California or the City.

The project area is not known to contain any paleontological resources; however, paleontological resources could exist.

While the potential for discovery of buried cultural resources on the site is low, it is possible however, that earthmoving activities associated with the proposed residential development could result in the exposure or destruction of unknown subsurface cultural resources.

Impact CUL-1 Implementation of the project could result in the destruction of unknown archaeological or paleontological resources. **(Significant Impact)**

Mitigation Measures: In the unlikely event that cultural materials are found during site grading or excavation, the following standard measure will reduce cultural resource impacts to a less than significant level:

MM CUL-1.1 In the event that known or suspected Native American remains are encountered or significant historic or archaeological materials are discovered, ground-disturbing activities shall be immediately stopped. Examples of significant historic or archaeological materials include, but are not limited to, concentrations of historic artifacts (e.g., bottles, ceramics) or prehistoric artifacts (chipped chert or obsidian, arrow points, groundstone mortars and pestles), culturally altered

ash-stained midden soils associated with pre-contact Native American habitation sites, concentrations of fire-altered rock and/or burned or charred organic materials, and historic structure remains such as stone-lined building foundations, wells or privy pits. Ground-disturbing project activities may continue in other areas that are outside the discovery locale.

MM CUL-1.2 An "exclusion zone" where unauthorized equipment and personnel are not permitted shall be established (e.g., taped off) around the discovery area plus a reasonable buffer zone by the Contractor Foreman or authorized representative, or party who made the discovery and initiated these protocols, or if on-site at the time or discovery, by the Monitoring Archaeologist (typically 25 to 50 feet for single burial or archaeological find).

MM CUL-1.3 The discovery locale shall be secured (e.g., 24 hour surveillance) as directed by the City or County if considered prudent to avoid further disturbances.

MM CUL-1.4 The Contractor Foreman or authorized representative, or party who made the discovery and initiated these protocols shall be responsible for immediately contacting by telephone the parties listed below to report the find and initiate the consultation process for treatment and disposition: 1) the City of Morgan Hill Community Development Director; 2) the Contractor's Point(s) of Contact; 3) The Coroner of the County of Santa Clara (if human remains found); 4) The Native American Heritage Commission (NAHC) in Sacramento; and 5) The Amah Mutsun Tribal Band.

MM CUL-1.5 If human remains are discovered, the Coroner has two working days to examine the remains after being notified of the discovery. If the remains are Native American the Coroner has 24 hours to notify the NAHC. The NAHC is responsible for identifying and immediately notifying the Most Likely Descendant (MLD) from the Amah Mutsun Tribal Band. (Note: NAHC policy holds that the Native American Monitor will not be designated the MLD.)

Within 24 hours of their notification by the NAHC, the MLD will be granted permission to inspect the discovery site if they so choose. Within 24 hours of their notification by the NAHC, the MLD may recommend to the City's Community Development Director the recommended means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials. Only those osteological analyses or DNA analyses recommended by the Amah Mutsun Tribal Band may be considered and carried out.

If the MLD recommendation is rejected by the City of Morgan Hill the parties will attempt to mediate the disagreement with the NAHC. If mediation fails then

the remains and all associated grave offerings shall be reburied with appropriate dignity on the property in a location not subject to further subsurface disturbance.

MM CUL-1.6 If paleontological resources are encountered during subsurface construction activities, all work within 50 feet of the discovery shall be redirected until a qualified paleontologist can evaluate the finds and make recommendations. If the paleontological resources are found to be significant, they shall be avoided by project construction activities and recovered by a qualified paleontologist. Upon completion of the recovery, a paleontological assessment shall be conducted by a qualified paleontologist to determine if further monitoring for paleontological resources is required. The assessment shall include: 1) the results of any geotechnical investigation prepared for the project site; 2) specific details of the construction plans for the project site; 3) background research; and 4) limited subsurface investigation within the project site. If a high potential to encounter paleontological resources is confirmed, a monitoring plan of further project subsurface construction shall be prepared in conjunction with this assessment. After project subsurface construction has ended, a report documenting monitoring, methods, findings, and further recommendations regarding paleontological resources shall be prepared and submitted to the Director of Community Development. **(Less Than Significant Impact with Mitigation)**

4.5.3 Conclusion

There are no known historic or prehistoric cultural resources on or adjacent to the site. The project will result in a less than significant impact on cultural resources with implementation of the above-listed mitigation measures. **(Less Than Significant Impact with Mitigation)**

4.6 GEOLOGY AND SOILS

The following discussion is based on a *Geotechnical Investigation* prepared by TMakdissy Consulting, Inc. in May, 2012. The report is attached to this Initial Study as Appendix D.

4.6.1 Setting

4.6.1.1 *Soils and Topography*

The site is relatively flat, with an elevation of approximately 360 feet above mean sea level. There are no significant topographical or water features on or adjacent to the project site. Based on the collection of samples from five (5) soil borings at the site in April 2012, near surface soil conditions, are consistent throughout the site and consist of brown silty sand with gravel which grades to rusty brown silty sand with increasing amounts of gravel to the full depth of the borings. Soil samples were collected at borings depths ranging from approximately six inches below ground surface (bgs) to 25 feet bgs. The soil samples collected were dense at all boring depths.

Soils composed primarily of sand and gravel are not considered expansive soils because the soil volume does not change with a change in moisture content. Sands and silts with relatively low amounts of clay minerals have low expansion potential.[12] The site's soil is classified as well drained and the capacity of the most limiting layer to transmit water is moderately high to high. The water capacity of the soil is moderate at about eight inches and the frequency of the soil flooding or ponding is exceptionally low.[13]

Groundwater levels fluctuate based upon seasonal rainfall, time of year, local irrigation, and well pumping. Groundwater was not encountered at the site in any of the soil borings to the maximum depths explored which ranged from 15 to 25 feet bgs. As described above, soils overlaying the site are variations of sandy soils and have a low expansion potential.

4.6.1.2 *Seismicity*

The San Francisco Bay Area is one of the most seismically active regions in the United States. An earthquake of moderate to high magnitude generated within the San Francisco Bay region could cause considerable ground shaking at the project site. The degree of shaking is dependent on the magnitude of the event, the distance to its zone of rupture, and local geologic conditions. The San Andreas Fault, located approximately 11.2 southwest of the site, is the most likely fault to affect the site with strong ground motions. Additional faults that may also affect the site are the Calaveras Fault, located approximately 3.1 miles to the northwest and the Sargent Fault, located approximately 8.1 miles southwest.

[12] California (CA) Department of Fish and Wildlife, CA Department of Water Resources, National Marine Fisheries Service, U.S. Department of the Interior, and U.S. Fish and Wildlife. *Environmental Water Account. Draft Environmental Impact Statement/Environmental Impact Report*. Volume 1, Chapter 7. July 2003. Available at: <http://www.usbr.gov/mp/EWA/DraftEIS-EIR.html>. Accessed March 25, 2013.
[13] United States Department of Agriculture, Natural Resources Conservation Service. *Custom Soil Resource Report for Eastern Santa Clara Area, California*. January 2013.

The site is not located within the boundaries of the Alquist-Priolo Earthquake Fault Zone studies zone and there are no previously identified fault lines on the site or that trend toward the site.[14] The potential for fault rupture at the site is very low.

Liquefaction

Soil liquefaction is a condition where soils near the ground surface undergo a substantial loss of strength during seismic events. Loose, water-saturated soils are transformed from a solid to a liquid state during ground shaking. Soils most susceptible to liquefaction are loose, uniformly graded, saturated, fine-grained sands that lie close to the ground surface. Evaluation of liquefaction potential on this site was based on the soil type, density of the site soils, and the absence of groundwater at shallow depth. Based on the data collected during field investigations, liquefaction potential at the site is low. The Association of Bay Area Governments (ABAG) designates the site as an area with low liquefaction susceptibility, which is consistent with the results from field investigations.[15]

4.6.2 Environmental Checklist and Discussion of Impacts

GEOLOGY AND SOILS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
a) Rupture of a known earthquake fault, as described on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☐	☒	1,14, 15
b) Strong seismic ground shaking?	☐	☐	☒	☐	1,14
c) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	1,14, 16
d) Landslides?	☐	☐	☐	☒	1,17, 18
2) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	1

[14] California Department of Conservation, California Geological Survey. *Special Studies Zone. Morgan Hill. Revised Official Map*. January 1982. Available at: <http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm>. Accessed March 26, 2013.

[15] Association of Bay Area Governments. *Earthquake and Hazards Information.* <http://gis.abag.ca.gov/website/liquefactionsusceptibility/>. Accessed March 25, 2013.

GEOLOGY AND SOILS					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
3) Be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒	1,16, 17,18
4) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐	1,14
5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒	1

4.6.2.1 *Geological Impacts*

The likelihood of fault rupture at the site is low; however, the site is located in a seismically active region and strong ground shaking will likely occur during the life of the project. Soils at the site are not susceptible to liquefaction. The site and surrounding areas are relatively flat (approximately 360 feet above msl). The project will not, therefore, be exposed to landslide or erosion related hazards. The site is considered to be an area of relatively stable ground not likely to be involved in landsliding, faulting or other lateral displacement type ground failures.[16] Based on the *Santa Clara County Geologic Hazard Zones* Map, the site is not located in a compressible soil, fault rupture, landslide, or liquefaction hazard zone.[17] **(Less Than Significant Impact)**

Lateral spreading is a phenomenon related to liquefaction whereby shaking results in the horizontal displacement of soil toward a creek, other open channel or other "free" face, such as an excavation boundary. Since the soils on the site are not prone to liquefaction nor is the site near a creek or other open channel, the probability of lateral spreading occurring on-site is low.
(Less Than Significant Impact)

To avoid or minimize potential damage from seismic shaking, the project will be built using standard engineering and seismic safety design techniques. Building design and construction at the site will be completed in conformance with the recommendations of a design-level geotechnical investigation, which will be included in a report to the City. The structural designs for the proposed development will account for repeatable horizontal ground accelerations. The report shall be reviewed and

[16] City of Morgan Hill. *Geology, Geologic and Geotechnical Hazards. Ground Movement Potential Map.* December 1991.
[17] Santa Clara County. *Santa Clara County Geologic Hazard Zones*. Adopted February 2002. Last Modified December 2012. Available at: <http://www.sccgov.org/sites/planning/GIS/GeoHazardZones/Pages/SCCGeoHazardZoneMaps.aspx>. Accessed March 26, 2013.

approved of by the City of Morgan Hill Building Division as part of the building permit review and issuance process. The buildings will be required to meet the requirements of applicable Building and Fire Codes, including the 2010 California Building Code Chapter 16, Section 1613,[18] as adopted or updated by the City. The project will be designed to withstand soil hazards identified on the site and the project shall be designed to reduce the risk to life or property to the extent feasible and in compliance with the Building Code. **(Less Than Significant Impact)**

Additionally, the project includes the construction of a residential development that would connect to existing sewer sanitary system. No septic systems will be developed under the project; therefore, no impacts related to septic systems would occur. **(Less Than Significant Impact)**

4.6.3 Conclusion

Conformance with the recommendations of a design-level geotechnical report and with the 2010 Building Code, and conformance with a City-approved Erosion Control Plan will avoid geology and soil impacts at the site. **(Less Than Significant Impact)**

[18] International Code Council. 2010 California Building Code, Title 24, Part 2, Section 1613, Earthquake Loads. Available at: <http://publicecodes.cyberregs.com/st/ca/st/b200v10/index.htm>. Accessed March 26, 2013.

4.7 GREENHOUSE GAS EMISSIONS

4.7.1 Setting

4.7.1.1 *Background Information*

This section provides a general discussion of global climate change and focuses on emissions from human activities that alter the chemical composition of the atmosphere. The discussion on global climate change and greenhouse gas (GHG) emissions is based in part upon the California Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32) and research, information and analysis completed by the International Panel on Climate Change (IPCC), the U.S. EPA, and the California Air Resources Board (CARB).

Global climate change refers to changes in weather including temperatures, precipitation, and wind patterns. Global temperatures are modulated by naturally occurring and anthropogenic (generated by mankind) atmospheric gases such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (NOx).[19] These gases allow sunlight into the earth's atmosphere but prevent heat from radiating back out into outer space and escaping from the earth's atmosphere, thus altering the earth's energy balance. This phenomenon is known as the greenhouse effect.

Naturally occurring GHGs include water vapor,[20] CO_2, CH_4, NO_x, and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also GHGs, but are for the most part solely a product of industrial activities.

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of GHGs have a broader, global impact. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors.

Impacts to California from climate change include shifting precipitation patterns, increasing temperatures, increasing severity and duration of wildfires, earlier melting of snow pack and effects on habitats and biodiversity. Sea levels along the California coast have risen up to seven inches over the last century, and average annual temperatures have been increasing. These and other effects will likely intensify in the coming decades and significantly impact the State's public health, natural and manmade infrastructure, and ecosystems.[21]

---

[19] IPCC, 2007: Summary for Policymakers. In: Climate Change 2007: The Physical Science Bases. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available at: <http://ipcc.ch/ >. Accessed March 25, 2013.

[20] Concentrations of water are highly variable in the atmosphere over time, with water occurring as vapor, cloud droplets and ice crystals. Changes in its concentration are also considered to be a result of climate feedbacks rather than a direct result of industrialization or other human activities. For this reason, water vapor is not discussed further as a greenhouse gas.

[21] State of California Energy Commission. *2009 California Climate Adaptation Strategy Discussion Draft. Frequently Asked Questions.* August 3, 2009. <www.climatechange.ca.gov/adaptation/documents/2009-07-31_Discussion_Draft-Adaptation_FAQs.pdf>. Accessed March 25, 2013.

Agencies at the international, national, state, and local levels are considering strategies to control emissions of gases that contribute to global warming. There is no comprehensive strategy that is being implemented on a global scale that addresses climate change; however, in California a multi-agency "Climate Action Team," has identified a range of strategies and the Air Resources Board, under AB 32, has approved the *Climate Change Scoping Plan* (Scoping Plan). AB 32 requires achievement by 2020 of a Statewide greenhouse gas emissions limit equivalent to 1990 emission levels, and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions. The CARB and other State agencies are currently working on regulations and other initiatives to implement the Scoping Plan. By 2050, the State plans to reduce emissions to 80 percent below 1990 levels.

Bay Area 2010 Clean Air Plan

The Bay Area 2010 Clean Air Plan (CAP) is a multi-pollutant plan prepared by the Bay Area Air Quality Management District (BAAQMD) that addresses GHG emissions along with other air emissions in the San Francisco Bay Area Air Basin. One of the key objectives in the CAP is climate protection. The 2010 CAP includes emission control measures in five categories: Stationary Source Measures, Mobile Source Measures, Transportation Control Measures, Land Use and Local Impact Measures, and Energy and Climate Measures. Consistency of a project with current control measures is one measure of its consistency with the CAP. The current CAP also includes performance objectives, consistent with the State's climate protection goals under AB 32 and SB 375, designed to reduce emissions of GHGs to 1990 levels by 2020 and 40 percent below 1990 levels by 2035.

Bay Area Air Quality Management District: CEQA Guidelines

BAAQMD adopted an updated version of its CEQA air quality thresholds (updated May 2011) and developed guidelines for assessing and mitigating impacts under CEQA, including thresholds for GHG emissions. Due to a recent Superior Court case ruling in Alameda County (*California Building Industry Association versus BAAQMD Case No. RG10548693*), however, BAAQMD was required to cease dissemination of the CEQA Air Quality Guidelines, pending review of the Guidelines under CEQA. BAAQMD has appealed this ruling. Ultimately, the thresholds of significance used to evaluate the proposed developments are determined by the Lead Agency, the City of Morgan Hill. Per CEQA Guidelines Section 15064.7, the City has elected to use the thresholds and methodology included in the May 2011 BAAQMD Air Quality Guidelines, as they are based on substantial evidence and remain the most up-to-date, scientifically-based method available to evaluate air quality impacts.

Under BAAQMD's GHG emissions threshold, if a project results in operational-related GHG emissions of 1,100 metric tons of carbon dioxide equivalents ($CO_{2e)}$ a year or more or a efficiency greater than 4.6 metric tons of CO_{2e} per Service Population (residents and employees) per a year, it would make a cumulatively considerable contribution to GHG emissions and result in a cumulatively significant impact to global climate change. A threshold for stationary sources[22] of 10,000 metric tons of CO_{2e} a year also was adopted.

[22] Stationary sources, such as boilers and emergency backup generators, burn fuels and directly emit greenhouse gases from combustion.

The project size, 12 single-family dwelling units, is below the BAAQMD operational screening size (56 dwelling units) for GHG emissions. Therefore, no refined GHG analysis that includes modeling of GHG emissions, for either project is required.

4.7.1.2 *Existing Conditions*

Under existing conditions, the project site has one primary and one secondary residence (smaller cottage) which primarily result in GHG emissions from the generation of electricity and vehicle trips. Indirect emissions are generated from the burning of fuel required for site maintenance (e.g., infrequent disking and/or mowing to control fire hazards, etc.).

4.7.2 Environmental Checklist and Discussion of Impacts

GREENHOUSE GAS EMISSIONS					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project: 1) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐	1,8
2) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒	1,2,8

4.7.2.1 *Construction Greenhouse Gas Emissions (Temporary Emissions)*

Construction phases include site grading, trenching, building construction, and paving. The project site is located in an urbanized location, within close distance of construction supplies and equipment, which will help minimize greenhouse gas emissions generated from transport of construction materials and waste. There is no reliable method to estimate construction-related emissions associated with the manufacturing of project materials.

Neither the City of Morgan Hill nor the BAAQMD have quantified thresholds for construction activities, however, the emissions will be below the lowest threshold adopted by BAAQMD and given that the project site is in an urban setting close to construction supplies and equipment, manufacture and construction of the projects will not contribute substantially to local or regional greenhouse gas emissions. **(Less than Significant Impact)**

4.7.2.2 *Operational Greenhouse Gas Emissions (Ongoing Emissions)*

GHG (e.g., carbon dioxide, methane, and nitrogen dioxide) from operation of the project will include electricity and natural gas used by residents of the site, and fuel burned for transportation to and from

the site. Indirect emissions will include utility usage by building residents for water conveyance, wastewater treatment, and solid waste disposal.

Greenhouse Gas Emission Sources

Mobile Sources

Vehicle traffic is a source of GHG emissions for the project. The traffic and daily trip increase will be minimal (approximately 115 average daily trips); therefore, a formal traffic impact analysis is not required for this project. For comparison, 1,000 daily vehicle trips (averaging seven miles per trip) would generate approximately 1,100 metric tons of CO_2e per year (BAAQMD CO_2e threshold for operational emissions).[23]

Area Sources (including Natural Gas and Electricity Consumption)

Natural gas and electricity consumption are area sources of greenhouse gas emissions. The project will meet the California Energy Commission's Title 24 building energy efficiency standards, which were established by the state to reduce energy consumption.[24] With the implementation of these standards, greenhouse gas emissions resulting from the project's area sources will not have a significant impact on the environment.

Project Operational GHG Emissions

The project is below the BAAQMD operational screening size (56 dwelling units) for GHG emissions; therefore, no formal GHG analysis, for either project is required. The project emissions will not exceed the BAAQMD thresholds of significance. **(Less Than Significant Impact)**

4.7.2.3 *Consistency with Adopted Plans to Reduce GHG Emissions*

The project will be required to conform to applicable policies and processes listed in Chapter 15.65 of the Municipal Code which details the City's Sustainable Building Regulations.

The project will also be subject to new requirements under rule making developed at the State and regional level regarding greenhouse gas emissions. The project will not conflict with plans, policies or regulations adopted for the purpose of reducing the emissions of GHG. Therefore, the project will not conflict with any currently adopted local plans, policies, or regulations pertaining to GHG emissions. **(Less Than Significant Impact)**

[23] This estimate is based on the average fuel economy of 21.5 miles per gallon and a carbon dioxide emission rate of 19.8 pounds per gallon, as estimated by the US EPA. Available at: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>. Accessed May 2, 2013.
[24] California Energy Commission. *Building Energy Efficiency Program*. 2013. Available at: <http://www.energy.ca.gov/title24/>. Accessed April 26, 2013.

4.7.3 Conclusion

The project will not result in a significant impact from greenhouse gas emissions.
(Less Than Significant Impact)

4.8 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based in part on a *Phase I Environmental Site Assessment* (ESA), *Additional Phase II ESA*, and *Remedial Completion Report* prepared for the site by GeoSolve, Inc. in October, November and December 2010, respectively. These reports are attached to this Initial Study as Appendix E.

4.8.1 Setting

4.8.1.1 *Existing Environmental Setting*

The approximately 3.64-acre project site is bordered by Calle Siena on the western boundary, East Main Avenue on the eastern site boundary, and single-family residential developments on the northern and southern boundaries. The site is relatively flat with an elevation of approximately 365 feet above mean sea level (msl) and slopes gradually to the southwest. Coyote Creek is located approximately two miles north of the site and flows into the San Francisco Bay. The project site is located in the Gilroy-Hollister Valley Groundwater Basin and within the Llagas Groundwater Subbasin,[25] the inferred direction of groundwater is to the southwest.

Existing and Historic On-site Use

The site was a small family farm developed in 1912 which had a chicken coop, orchards, water tower and groundwater supply well. The site was occupied by orchards, three structures (primary residence, water tower, and garage) and a large water tank from 1939 to 1956. By 1965, orchards were removed from the project site and the second residence occurred north of the garage. The garage was used for minor automobile and/or farm equipment repair operations. By 1975, former greenhouse (used to cultivate carnations) occurred on the northern section of the site. No significant changes were observed on the project site from 1982 to 2005 based on historical records. There was no visual evidence of the occurrence of underground storage tanks (USTs) based on observations from an October 2010 Phase I ESA site reconnaissance; however, interviews with the property owner indicate that there was a past occurrence of a 350-gallon UST that stored non-potable water for irrigation and occurred immediately in front of the garage; this UST was removed most likely in the late 1980s or early 1990s although removal date was not listed. Buried debris was also observed in the garage with no visual evidence of contamination. One above-ground wooden water tank was observed on-site near the water tower. An abandoned water well was also on the site, south of the garage and extended approximately to 25 feet below ground surface (bgs).

In June 2013, two residential structures, a detached garage, an older water tower, a groundwater-supply well, and a well house were demolished. Currently, the site consists of trees, landscaping, and public open space.

[25] Santa Clara Valley Water District. *2012 Groundwater Management Plan*. July 2012.

Surrounding Land Uses

From 1939 to 1956, residences and associated outbuildings were immediately adjacent to the site on the northeast and southwest along East Main Avenue (a dirt road during this time). Orchards were also on all of the surrounding properties until 1956 (orchards were removed southwest of the site). By 1982, residential developments were located south of the site, and by 1993, additional development to the north, west, and east surrounded the site. The surrounding properties were listed single-family and multi-family residential residences in the City Directory from 1975 to 2007. The site is currently surrounded by residential land uses.

4.8.1.2 *On-Site Sources of Contamination*

Based on the Phase I ESA, the following site uses could be potential sources of on-site contamination.

Above-ground and Underground Storage Tanks

A former 350-gallon UST was located immediately in front of the former garage. No visual evidence (such as staining from leaks or odor) was observed during the site reconnaissance. Based on the Statewide (California) Environmental Evaluation and Planning System and the California Facility Inventory Databases for USTs, however, the former UST was installed in 1958; the removal date of the UST was not listed in the databases but was most likely removed during the late 1980s or early 1990s. Buried debris within and around the former UST pit is also a potential on-site source of contamination. Additionally, the above-ground wooden water tank, which was observed at the October 2010 site reconnaissance, is a potential source of contamination.

Hazardous Materials Use and Storage

Hazardous wastes and substances, such as waste-oil near the former above-ground water tank, pesticide containers stored in the well house, and gasoline additive containers (hydro-fluorocarbons) stored in the former garage are also potential on-site sources of contamination.

Within the City of Morgan Hill, a number of local, State, and federal regulations govern the use, transport, and storage of hazardous materials. A Hazardous Materials Business Plan is generally required of any facility which generates any quantity of hazardous waste or which handles hazardous materials in amounts greater than 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases. The implementation and enforcement of these local, state and federal regulations regarding the use, storage and transport of hazardous materials (including setbacks for flammable storage from property lines).

Lead-Based Paint and Asbestos-Containing Materials

In April 2013, the City ministerially approved the demolition of the structures on the site. These structures included two residential structures (one primary residence and one secondary residence), a garage, a water tower, an active groundwater-supply well, and a well house. The site's structures were demolished in June 2013. Lead-based paint and asbestos-containing materials were present

within the former structures. The paint that was on the interior and exterior of the former structures and asbestos containing materials (ACMs) that was within the ceiling, floor, and siding of the structures may have contaminated soils near the structures with lead and ACMs.

Agricultural Use

The former greenhouse used to cultivate carnations is a potential source of contamination due to the potential use of pesticides and herbicides. The project site was in agricultural production before the use of DDT and certain other toxic chemicals were banned in 1972. The former greenhouse used to cultivate carnations is a potential source of contamination due to the potential use of pesticides and herbicides.

4.8.1.3 *Off-Site Sources of Contamination*

Immediately to the north of the project site, contamination from agricultural uses could be a potential off-site source to the project site. An assessment was completed for the former residential property immediately to the north of the site to evaluate the occurrence of pesticides including dieldrin, DDT, and DDE. A *Soil Quality Evaluation Health Risk Assessment and Revised Workplan for Proposed Morgan Lane II*, which included soil sampling, was completed in November 2004 by Lowney and Associates for this former residential property. Elevated concentrations of dieldrin (insecticide) of up to 410 micrograms per kilogram (µg/kg) were detected in shallow soil samples which exceeded the U.S. Environmental Protection Agency (USEPA) Region IX Preliminary Remedial Goal of 30 µg/kg for soil in residential developments. DDT and DDE were detected at concentrations below regulatory human health screening levels. Soil contamination at the former residential property immediately to the north of the project site was remediated to residential standards. Due to the proximity of the property to the site, however, the property is considered a potential off-site source of contamination. The remediation work for this property was completed through the City of Morgan Hill and was not reported to or listed on the California Environmental Protection Agency's Cortese List.

In October 2010, a database search was made of 44 state and federal regulatory agency databases of contaminated or potentially contaminated properties; or properties where hazardous materials transportation, handling storage, and/or disposal occur. Based on this search, only one off-site property (formerly Ryan Enterprises) within a one-quarter mile radius is identified as a contamination source. The former Ryan Enterprises property is located on Serene Drive, approximately 100 feet east of the East Main Avenue and Serene Drive intersection, and 850 feet northeast and up-gradient from the project site. The property previously exceeded regulatory human health screening levels for motor oil, arsenic, lead, DDT and dieldrin primarily due to agricultural uses from 1940 until at least 1992. A portion of the property was also used for sandblasting and auto-painting operations prior to 1991. Contamination at the site was reported in 1992 and soil cleanup and sampling activities were completed at the site by 1996. Site assessments of the property indicate that the contaminants were below regulatory screening levels after remediation of the property. The property is listed in the California Department of Toxic Substance Control's

ENVIROSTOR database (part of the Cal/EPA's Cortese List pursuant Government Code Section 65962.5), as a "No Further Action" project; the case was closed by DTSC in January 2000.[26]

4.8.1.3 *Soil Sampling*

Based on the recommendations in the Phase I ESA completed in October 2010, soil samples were collected on the site in November 2010. Samples were collected from the former greenhouse, the buried debris pile and former UST pit within the garage. The samples were analyzed for total petroleum hydrocarbons (i.e., TPH as motor oil, gas or diesel), organochloride pesticides, and heavy metals identified in the California Administrative Manual (CAM 17 metals)[27] to evaluate the lateral and vertical extent of these chemicals around the former UST pit and debris pile within the garage area, and the lateral and vertical extent of cadmium and lead within the former nursery area. The lateral extent of organochloride pesticides was also evaluated within the soil samples collected from the northern portion of the project site. Samples were collected at depths ranging from 0.5 feet to 12 feet below ground surface (bgs).

Petroleum Hydrocarbons and Organochlorine Pesticides

Total petroleum hydrocarbons and organochlorine pesticides were either non-detectable or were detected below California Regional Water Quality Control Board – Region 2 (RWQCB) Environmental Screening Levels (ESLs) for soil in residential developments. Chlordane was detected below ESL in soil and debris samples originating from the debris pile within the garage.

Metals

Arsenic and vanadium (CAM 17 metals), however, were detected above the ESLs of 0.39 and 16 milligrams per kilogram (mg/kg) in all soil samples analyzed. Arsenic samples were below the arsenic average background concentration (2.86 mg/kg) in northern Santa Clara County and vanadium concentrations were below the typical average background concentrations in California (112 mg/kg).[28] The California Environmental Protection Agency utilizes background concentrations to establish permissible levels for chemical and metal concentrations in soil and groundwater. For the purposes of this Initial Study, background concentrations that should not be exceeded in northern Santa Clara County should also not be exceeded in southern Santa Clara County.

Cadmium was detected up to 21 mg/kg in a soil sample within the southern portion of the former greenhouse area, which exceeds the ESL of 1.7 mg/kg and northern Santa Clara County average background concentration of 1.49 mg/kg. The cadmium impaction on-site is limited to the surficial soil (to approximate depth of 0.5 foot bgs) in the southern portion of the former greenhouse area,

[26] California Department of Toxic Substances Control. *EnviroStor*. Ryan Properties. East Main Avenue and East Lane. Available at: <http://www.envirostor.dtsc.ca.gov/public/>. Accessed May 16, 2013.
[27] U.S. Department of the Interior, Bureau of Land Management. *Draft Engineering Evaluation/Cost Analysis Report. Chicago Research and Mercury Mines, Lake County, California. Appendix A - EE/CA Field Investigation Summary*. October 2011. Available at: <http://www.blm.gov/ca/st/en/fo/ukiah/chicago_research_mercury.print.html>. Accessed March 25, 2013.
[28] DVP and Associates. *Removal Action Workplan. Former University of California Bay Area Research and Extension Center (BAREC), Santa Clara*. October 2007. Available at: <http://www.envirostor.dtsc.ca.gov/public/community_involvement/5021100699/Final%20RAW.pdf>. Accessed March 25, 2013.

which is comprised of approximately 100 feet by 300 feet (15,000 cubic [ft^3] or 555 cubic yards [yd^3]) of soil.

Cadmium levels, however, were consistent with background concentrations in all other samples collected on-site in November 2010. All other analyzed metals were either not detected or were detected below ESLs.

4.8.1.4 *Remedial Action and Confirmation Soil Sampling and Analysis*

Initial Confirmation Sampling

Based on the elevated cadmium in the former greenhouse area and recommendations of the Phase II ESA, confirmation soil samples which were analyzed for total cadmium were collected within the former greenhouse area in December 2010. Elevated concentrations of cadmium up to 42 mg/kg occurred in one sample location within the former greenhouse area.

Remedial Action

Soil remediation was completed to reduce cadmium levels below the ESL of 1.7 mg/kg or cadmium background levels ranging from 0.2 to 10 mg/kg and averaging 1.49 mg/kg in northern Santa Clara County. Approximately 314 yd^3 of cadmium –impacted soil was excavated and disposed at a Class III landfill. After excavation, additional confirmation sample results show that cadmium concentration at this sample location that had concentrations up to 42 mg/kg was reduced to 1.4 mg/kg (below ESL and average background concentration). All final confirmation sample results indicate that cadmium concentrations were less than 10 mg/kg (within cadmium background level range) and the site average cadmium concentration was 1.35 mg/kg (less than the ESL and average background level for cadmium) within the former nursery area.

Furthermore, a total of ten 55-gallon drums of the chlordane-contaminated soil and debris (concentrations below ESL) originating from the garage debris pile was properly removed, stored, transported and disposed at a US EPA-approved incinerator.

4.8.1.5 *Applicable Plans, Policies and Regulations*

U.S. Environmental Protection Agency

The U.S. EPA is the federal agency responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. The legislation includes the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (commonly referred to as "Superfund"), the Superfund Amendments and Reauthorization Acts of 1986, and the Resource Conservation and Recovery Act of 1986. The EPA provides oversight and supervision for site investigations and remediation projects, and has developed land disposal restrictions and treatment standards for the disposal of certain hazardous wastes.

California Environmental Protection Agency

The California Environmental Protection Agency (Cal/EPA) serves as the umbrella agency for the Department of Toxic Substances Control (DTSC), the Office of Environmental Health Hazard Assessment (OEHHA), and the State Water Resources Control Board (SWRCB) and its associated regional Water Boards.

Department of Toxic Substance Control

The DTSC regulates remediation of properties where discharges to land could potentially present a public health risk. California legislation, for which the DTSC has primary enforcement authority, includes the Hazardous Waste Control Act and the Hazardous Substance Account Act. The DTSC generally acts as the lead agency for soil and groundwater cleanup projects, and establishes cleanup and action levels for subsurface contamination that are equal to, or more restrictive than, federal levels.

State Water Resources Control Board

The SWRCB, through its nine regional boards, regulates discharge of potentially hazardous materials to waterways and aquifers and administers basin plans for groundwater resources in various regions of the State. The Central Coast Regional Water Quality Control Board (RWQCB) is the regional board that has jurisdiction over the project area. The SWRCB provides oversight for properties at which the quality of groundwater or surface waters is threatened, and has the authority to require investigations and remedial actions.

Regional Water Quality Control Board

Central Coast RWQCB regulates discharges and releases to surface and groundwater in the project area. The RWQCB generally oversees cases involving groundwater contamination. Within the San Francisco Bay RWQCB, the County of Santa Clara Department of Environmental Health (SCDEH) handles most leaking underground storage tank (LUST) cases, so the RWQCB may oversee cases involving other groundwater contaminants; i.e., Spills, Leaks, Incidents, and Clean-up (SLIC) cases. In the case of spills at a project site, the responsible party would notify the SCDEH and then a lead regulator (SCDEH, RWQCB or DTSC) would be determined.

Government Code §65962.5 (Cortese List)

Section 65962.5 of the Government Code requires Cal EPA to develop and update (at least annually) a list of hazardous waste and substances sites, known as the Cortese List. The Cortese List is used by the State, local agencies, and developers to comply with CEQA requirements. The Cortese List includes hazardous substance release sites identified by the DTSC, SWRCB, and the Department of Resources Recycling and Recovery (CalRecycle).

Santa Clara County Airport Land Use Commission Comprehensive Land Use Plan

In accordance with the California State Aeronautics Act, the Santa Clara County ALUC adopted a Comprehensive Land Use Plan (CLUP) for the South County Airport. The CLUP establishes provisions for the regulation of land use, safety, and noise within the airport's Airport Influence Area (AIA) to minimize the public's exposure to safety hazards and excessive noise. All areas within the AIA should be regarded as potentially subject to aircraft over-flights and are subject to land use compatibility policies in the CLUP. The CLUP also establishes a Height Restriction Area, based on the Federal Aviation Administration (FAA) Part 77 imaginary surfaces and safety zones with appropriate land use types and density limitations for each zone. The project site is outside the AIA and the Height Restriction Area for the South County Airport.

Emergency Operations Plan

The City of Morgan Hill's Emergency Operations Plan is in accordance with the State of California Standardized Emergency Management System Guidelines[29] and the Association of Bay Area Governments Multi-Jurisdictional Local Hazard Mitigation Plan.[30] These guidelines and plan include standard operating procedures for earthquakes, floods, fires, and hazardous materials incidents. They set forth the responsibilities of personnel and personnel coordination with other agencies to ensure the safety of Morgan Hill citizens in the event of a fire, geologic, or other hazardous occurrence.

City of Morgan Hill General Plan

The following policies from the City's General Plan have been adopted for the purpose of reducing or avoiding impacts related to hazards and hazardous materials.

Policy 3k: Monitor the transportation of hazardous materials and wastes to reduce risks and ensure notification of South County jurisdictions in the event of a leak or spill.

Policy 3h: Vehicles and other equipment that may threaten the quality of water from leaking fuel tanks or oil spills should be removed from the site and/or repaired.

[29] California Emergency Management Agency. Standardized Emergency Management Guidelines. September 2006. Available at: <http://develop.oes.ca.gov/WebPage/oeswebsite.nsf/Content/7386D576C12F26F488257417006C07A7?OpenDocument>. Accessed February 27, 2013.

[30] Association of Bay Area Governments. *Taming Natural Disasters. Multi-Jurisdictional Local Hazard Mitigation Plan for the San Francisco Bay Area*. Adopted 2005. Updated 2010. Available at: <http://quake.abag.ca.gov/mitigation/>. Accessed February 27, 2013.

4.8.2 Environmental Checklist and Discussion of Impacts

HAZARDS AND HAZARDOUS MATERIALS					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐	1,19, 20,21
2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐	1,19, 20,21
3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐	1
4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, will it create a significant hazard to the public or the environment?	☐	☐	☒	☐	1,19
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, will the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒	1,22
6) For a project within the vicinity of a private airstrip, will the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒	1,22
7) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒	1,23, 24
8) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒	1,25

4.8.2.1 *On-Site Contamination Impacts*

Soil Contamination

As described previously, due to the historic uses on and adjacent to the project site, surficial and subsurface soil samples were collected from the site to determine if subsurface impacts occurred as a result of historical operations. Samples were analyzed for petroleum hydrocarbons, organochlorine pesticides, and CAM 17 metals. Total petroleum hydrocarbons and organochlorine pesticides were either non-detectable or detected below ESLs. Chlordane was detected at the bottom of the garage debris pile but was below the ESL concentration.

Arsenic and vanadium (CAM 17 metals), however, were detected above the ESLs in all soil samples analyzed. Arsenic samples were below the arsenic average background concentration (2.86 mg/kg) in northern Santa Clara County and vanadium concentrations were below the typical average background concentrations in California. The cadmium in a soil sample within the southern former greenhouse area exceeded the ESL and northern Santa Clara County average background concentration.

Soil remediation was completed to reduce cadmium concentrations to below the ESL or background levels. After excavation, all final confirmation sample results indicate that cadmium concentrations were less than the background level range and the site average cadmium concentration was less than the ESL and average background level for cadmium within the former nursery area. Additionally, chlordane-contaminated soil and debris (concentrations below ESL) originating from the garage debris pile were properly removed from the site and transported to US EPA-approved incinerator. For these reasons, impacts from CAM 17 metals, organochlorine pesticides and petroleum hydrocarbons are likely less than significant. **(Less Than Significant Impact)**

Lead-Based Paint and Asbestos Impacts

Lead-based paint and asbestos-containing materials were present within the former structures. The paint that was on the interior and exterior of the former structures and ACMs that were within the ceiling, floor, and siding of the structures may have contaminated soils near the structures with lead and ACMs. This could create a significant hazard to the construction workers or future residents if not properly handled.

Impact HAZ-1 Exposure of construction workers and future residents to contaminated soils could have a significant effect. **(Significant Impact)**

Mitigation Measures: The following mitigation measure will reduce potential hazardous material impacts to a less than significant level.

MM HAZ-1.1 Prior to issuance of a grading permit or building permit, a minimum of five (5) surficial soil samples must be collected beneath the five former structures. The soil samples must be analyzed for total lead and asbestos using EPA Method 7240 and ARB 435. The results of the soil samples will be provided to the City

of Morgan Hill for review and approval prior to issuance of grading or building permits. **(Less Than Significant Impact with Mitigation)**

Well Abandonment

The active water supply well on-site (adjacent to the existing water tower) will be properly destroyed, with Santa Clara Valley Water District (SCVWD) approval, prior to development of the site. A well destruction permit shall be obtained from the SCVWD and the well decommissioned prior to issuance of grading permits, encroachment permit, or other ground disturbing activities (i.e., off-site or on-site improvements), whichever occurs first. **(Less Than Significant Impact)**

4.8.2.2 *Off-Site Contamination*

Based a regulatory database search completed in October 2010, only one off-site property (within a one-quarter mile radius) was identified as a potential contamination source. This property is located approximately 1,100 feet northeast and up-gradient from the site. The property, however, is listed in the DTSC's ENVIROSTOR database as a "No Further Action" project; the case was closed by DTSC in January 2000. Additionally, a former residential property, not listed on state or federal agency databases, immediately to the north of the site was considered a potential off-site source of contamination due to the elevated levels of dieldrin (organochlorine pesticide). Sample results from the Phase I ESA (October 2010), however, showed that organochlorine pesticide levels did not exceed ESLs; therefore, the elevated dieldrin levels were most likely former residential property and have not been shown to impact the project site.

Soil contamination is localized and, because there are no hazardous materials users directly adjacent to the project site, off-site soil contamination would have no direct exposure impact on the proposed project. Although soil contamination is localized, contaminants can migrate in the down-gradient direction from their original source through groundwater and contaminate nearby areas (typically within 250 feet). The immediate project area is mostly comprised of residences which do not typically use large quantities of hazardous materials. Therefore, the project would not likely be impacted by off-site soil and/or groundwater contamination. **(Less Than Significant Impact)**

4.8.2.2 *Other Hazards*

Airport Safety Hazards

The project site is not located within the South County Airport Influence Areas (areas surrounding the Airport that are affected by noise, height, and safety considerations) or Federal Aviation Administration Height Restriction Area;[31] therefore, the project will not result in an airport safety hazard. Since the site is not within the airport influence area (AIA) of either airport, it is not subject to Santa Clara County Airport Land Use Commission (ALUC) evaluation. Additionally, the project site is not located within the vicinity of a private airstrip. **(No Impact)**

[31] Santa Clara County Airport Land Use Commission. *Comprehensive Land Use Plan, South County Airport.* May 2008. Available at: <http://www.countyairports.org/docs/CLUP_E16/CLUP_Draft_E16_052108.pdf>. Accessed February 27, 2013.

Emergency Response

The project would not interfere with the City-adopted Local Hazard Mitigation Plan or any adopted statewide emergency response or evacuation plans. **(No Impact)**

Proximity of Construction to Schools

The project site is located approximately 0.2 miles northeast of El Toro Elementary School. The project will require the use of construction equipment and the movement of soil. Construction and soil handling will be completed in accordance with construction best management practices (Section 4.3.2.1, *Short-Term Air Quality Impacts*). For these reasons, construction of the project should not pose a significant risk to nearby schools.
(Less Than Significant Impact)

Wildfires

The project is in a highly developed urban area and it is not adjacent to any wildland areas that would be susceptible to fire. The site is within the city limits and is not within a State of California Very High Fire Hazard Severity Zone[32] or the City's wildland and urban interface.[33] **(No Impact)**

4.8.3 Conclusion

Implementation of the project, in accordance with the identified mitigation measures, will not result in a significant hazards or hazardous materials impact. **(Less Than Significant Impact with Mitigation)**

[32] California Department of Forestry and Fire Protection. *Santa Clara County*. *Fire Hazard Severity Zones in State Responsibility Area*. Adopted November 2007. Available at: <http://www.fire.ca.gov/fire_prevention/fhsz_maps/fhsz_maps_santaclara.php>. Accessed February 27, 2013.
[33] City of Morgan Hill. *City of Morgan Hill Wildland Urban Interface.* March 2009. Available at: <http://www.morgan-hill.ca.gov/index.aspx?nid=657>. Accessed March 25, 2013.

4.9 HYDROLOGY AND WATER QUALITY

4.9.1 Setting

The project site encompasses 3.64 acres. The property is relatively flat with elevation of approximately 365 feet above msl. Local topography slopes gradually to the southwest. The nearest waterways to the site are the Madrone Channel (approximately 0.4 miles east of the site) and Butterfield Channel (approximately 0.4 miles to the west of the site). Coyote Creek is located approximately 2.0 miles north of the site and flows north into the San Francisco Bay. There are no waterways on or adjacent to the project site.

Drainage from the property flows in the southwest direction, along with the topography. Stormwater, however, is typically collected in storm drains. The surface on the project site is mostly pervious with some impervious surfaces due to the primary residence and secondary residence.

4.9.1.1 *Drainage*

The City of Morgan Hill is divided into several hydrologically distinct drainage areas. Each drainage area has a system of conveyance facilities, pumps, and detention basins to collect and dispose the runoff. The stormwater runoff from these areas is collected and ultimately discharged into creeks that flow through the City and are tributary to either Monterey Bay or San Francisco Bay. The drainage areas include Coyote Creek, Fisher Creek, Tennant Creek, Madrone Channel, Butterfield Channel, West Little Llagas Creek, and Llagas Creek.

Drainage from the property flows in the southwest direction, along with the topography. Stormwater, however, is typically collected in the existing on-site or off-site stormwater facilities then flows into the City's stormwater system. The project site is located within the Butterfield Channel drainage area. Butterfield Channel is an improved channel that drains the area west of US 101 and east of Railroad Avenue to East Little Llagas Creek.[34] The channel merges with Llagas Creek and flows to the Monterey Bay.

4.9.1.2 *Groundwater*

The project site is located in the Gilroy-Hollister Valley Groundwater Basin and within the Llagas Groundwater Subbasin;[35] the inferred direction of groundwater is to the southwest. Groundwater levels fluctuate based upon seasonal rainfall, time of year, local irrigation, and well pumping. Groundwater was not encountered at the project site in any of the soil borings to the maximum depth (25 feet bgs) explored.[36] Based on Santa Clara Valley Water District (SCVWD), depth to groundwater at the site ranges seasonally from 14 feet to 45 feet below ground surface (bgs).

[34] City of Morgan Hill. *Storm Drainage System Master Plan*. January 2002. Available at: < http://ca-morganhill.civicplus.com/DocumentCenter/Home/View/622>. Accessed March 12, 2013.
[35] Santa Clara Valley Water District. *2012 Groundwater Management Plan*. July 2012.
[36] TMakdissy Consulting, Inc. *Geotechnical Investigation on Proposed 12 Units Residential Development Calle Siena, East Main Avenue, Morgan Hill, California*. May 2012.

4.9.1.3 *Water Quality*

The water quality of ponds, creeks, streams, and other surface water-bodies can be greatly affected by pollution carried in contaminated surface runoff. Pollutants from unidentified sources, known as "non-point" source pollutants, are washed from streets, construction sites, parking lots, and other exposed surfaces into storm drains. Grading and excavation activities during construction of the proposed billboard could increase the amount of surface water runoff (i.e., particles of fill or excavated soil) from the site, or could erode soil downgradient, if the flows are not controlled. Deposition of eroded material in water features could increase turbidity, thereby endangering aquatic life, and reducing wildlife habitat. Excessive precipitation can carry these non-point pollutants downstream. Best management practices would be implemented, to control erosion and sedimentation during construction, minimize surface runoff from the project site, and reduce impacts to water quality in the area.

4.9.1.4 *Flooding*

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM)[37] designates the project site as Zone X with an approximately 0.2% chance of an annual flood. Zone X is defined as an area of moderate flood hazard, generally the area between the limits of the 100-year and 500-year floods.

4.9.1.5 *Dam Failure*

Dams located near Morgan Hill include Anderson Dam and Chesbro Dam. The project site is located within the Anderson Dam failure inundation area.[38]

4.9.1.6 *Seiches, Tsunamis, and Mudflows*

A seiche is defined as a wave generated by rapid displacement of water within a reservoir or lake, due to an earthquake that triggers land movement within the water body or landsliding into or beneath the water body. The site is not located near a waterbody that is considered susceptible to a seismically-induced seiche, given the physical geography of the site and physical characteristics of its surrounding waterbodies.

A tsunami is a very large tidal wave caused by an underwater earthquake or volcanic eruption. Tsunamis affecting the Bay Area can result from off-shore earthquakes within the Bay Area. The site is not located within a tsunami inundation area.[39]

---

[37] Federal Emergency Management Agency (FEMA). *Flood Insurance Rate Map. Santa Clara County, California. Map Number 06085C0444H.* May 2009. Available at: <https://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1>. Accessed March 25, 2013.

[38] Association of Bay Area Governments. *Dam Failure Inundation Maps.* Last Modified January 2013. Available at: <http://quake.abag.ca.gov/dam-failure/>. Accessed March 12, 2013.

[39] Association of Bay Area Governments. Tsunami Inundation Map for Coastal Evacuation. Available at: <http://quake.abag.ca.gov/tsunamis/>. Accessed March 27, 2013.

A mudflow is a large rapid (up to approximately 50 miles per hour) mass of mud formed by loose earth and water. Hillsides and slopes of unconsolidated material could be at risk to mudflows if these areas become saturated.[40] The project area is relatively flat (approximately 15 above msl) and there are no hillsides near the site. Therefore, the site is not likely to be subjected to mudflow.

4.9.1.7 *Regulatory Framework*

The Federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality. Regulations set forth by the U.S. Environmental Protection Agency (EPA) and the State Water Resources Control Board have been developed to fulfill the requirements of this legislation. EPA's regulations include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by water quality control boards, which for the Morgan Hill area south of Cochrane Road[41] is the Central Coast Regional Water Quality Control Board (RWQCB).[42] The Central Coast RWQCB issues and enforces NPDES permits for discharges to water bodies in the portion of Santa Clara County that drains to the Monterey Bay. The RWQCB is also tasked with preparation and revision of a regional Water Quality Control Plan, also known as the Basin Plan. The Central Coast RWQCB's latest Basin Plan was approved in September 1994, and last revised in June 2011. The RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements to control water quality and protect beneficial uses.

Under Section 303(d) of the 1972 Clean Water Act, States are required to identify impaired surface water bodies and develop total maximum daily loads (TMDLs) for contaminants of concern.[43] The TMDL is the quantity of pollutant that can be safely assimilated by a water body without violating water quality standards. Listing of a water body as impaired does not necessarily suggest that the water body cannot support the beneficial uses; rather, the intent is to identify the water body as requiring future development of a TMDL to maintain water quality and reduce the potential for future water quality degradation. The Llagas Creek watershed is listed by the U.S. Environmental Protection Agency as an impaired water body for chloride, fecal coliform, low dissolved oxygen, pH, sodium, and total dissolved solids.

NPDES General Permit for Construction Activity

The State Water Resources Control Board has implemented a NPDES General Construction Permit for the State of California. Construction activity subject to this permit includes clearing, grading, and ground disturbances such as stockpiling or excavation. For projects disturbing one acre or more of

[40] U.S. Geological Survey. *Landslide Hazards*. USGS Fact Sheet FS-071-00. May 2000.
[41] Santa Clara Valley Water District. *Uvas-Llagas Watershed Map.* <http://www.valleywatercompplan.org/watersheds/view/449 > Accessed July 28, 2011.
[42] Historically, efforts to prevent water pollution focused on "point" sources, meaning the source of the discharge was from a single location (e.g., a sewage treatment plant, power plant, factory, etc.). More recent efforts are focusing on pollution caused by "non-point" sources, meaning the discharge comes from multiple locations. The best example of this latter category is urban stormwater runoff, the source of which is a myriad of impervious surfaces (e.g., highways, rooftops, parking lots, etc.) that are found in a typical city or town.
[43] California State Water Resources Control Board, "Total Maximum Daily Load Program," http://www.swrcb.ca.gov/water_issues/programs/tmdl/303d_lists2006_approved.shtml, viewed November 2, 2010.

soil,[44] a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) must be prepared prior to commencement of construction.[45]

NPDES Municipal Stormwater Permit

The U.S. Environmental Protection Agency has delegated management of NPDES requirements for municipal urban runoff discharges in California to the State Water Resources Control Board and the nine RWQCB's. The City of Morgan Hill has adopted and prepared a Storm Water Management Plan (SWMP) and been issued the NPDES Small Municipal Separate Storm Sewer Systems (small MS4s) General Permit by the Central Coast RWQCB [Order Number 2003-0005-DWQ, Waste Discharge Identification Number (WDID#) 3-43MS03020]. The City of Morgan Hill is designated by the EPA as a small MS4, serving less than 100,000 people. Morgan Hill's previous Small MS4 permit expired in June 2010, and the new regional permit serves as a renewal of the Small MS4 permit for Morgan Hill. The City's SWMP plan outlines a comprehensive five year plan to establish Best Management Practices (BMPs) through six Minimum Control Measures (MCMs) to help reduce the discharge of pollutants into waterways and to protect local water quality caused by stormwater and urban runoff within the corporate limits of Morgan Hill.

4.9.2 Environmental Checklist and Discussion of Impacts

HYDROLOGY AND WATER QUALITY					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
1) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐	1,2
2) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there will be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells will drop to a level which will not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐	1

[44] Effective July 1, 2010, all dischargers were required to obtain coverage under the Construction General Permit Order 2009-0009-DWQ adopted on September 2, 2009. Source: State Water Resources Control Board website, updated February 2013. Available at: <http://www.swrcb.ca.gov/water_issues/programs/stormwater/construction.shtml>. Accessed March 25, 2013.

[45] State Water Resources Control Board, Division of Water Quality. *Construction General Permit Fact Sheet*. Last Updated January 2013. Available at: <http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml>. Accessed March 26, 2013.

HYDROLOGY AND WATER QUALITY					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which will result in substantial erosion or siltation on-or off-site?	☐	☒	☐	☐	1,2
4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which will result in flooding on- or off-site?	☐	☐	☒	☐	1,2
5) Create or contribute runoff water which will exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐	1
6) Otherwise substantially degrade water quality?	☐	☐	☒	☐	1,2
7) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☒	☐	1,2,26
8) Place within a 100-year flood hazard area structures which will impede or redirect flood flows?	☐	☐	☒	☐	1,2,26
9) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐	1,2,27
10) Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐	1,2,28

4.9.2.1 *Drainage*

The project will add approximately 46,076 s.f. (1.1 acres) of impervious surfaces to the site, which will increase stormwater runoff from the site. At completion of project construction, the site will increase impervious surfaces by 29 percent. Stormwater from the project site will be collected from the streets by storm drains which will release stormwater into water treatment and retention basins, which discharges into the City's stormwater system along Calle Siena and East Main Avenue.

Table 4.9-1 Pervious and Impervious Surfaces On-Site						
Site Surface	**Existing/Pre-Construction (s.f.)**	**%**	**Project/Post-Construction (s.f.)**	**%**	**Difference (s.f.)**	**%**
Impervious	11,879	7.5	57,955	36.5	46,076	29.0
Pervious	146,715	92.5	100,639	63.5	-46,076	29.0
TOTAL	**158,594**	-	**158,594**	-		

Stormwater from the site will infiltrate into pervious areas. Based on the conceptual grading plan, water not capable of infiltrating the ground will be will be directed into the new internal street and will flow to the water treatment and retention areas in the open space area in proposed stormwater piping . Ultimately, water from the retention basins will flow into the City's existing stormwater system.

Per the implementation of the SWPPP and other drainage standards implemented by the City, the project should not significantly increase storm water flows into the existing system. The project will be required to minimally retain all water from the 85th percentile of rainfall events (approximately two to five year storm events) on site; therefore, during 85 percent of the rainfall events, the existing storm drain system would not be impacted by the project. Furthermore, the on-site systems (retention basins) will be required to be designed to detain a volume of water up to a 25-year storm event while releasing water at a rate reflective of the 10-year predevelopment flow. This design limits stormwater flows off-site to less than 10-year predevelopment flows. The existing public storm water system is already designed to convey a 10-year storm event; therefore, the project should not significantly contribute to any additional flooding during the most frequent events. The final drainage system design for the project will be subject to review and approval by the City of Morgan Hill Public Works Department, who will confirm that the proposed drainage system for the project is consistent with the City's Storm Drainage Master Plan and standard stormwater-related conditions of approval. **(Less Than Significant Impact)**

4.9.2.2 *Groundwater*

Depth to groundwater levels occurs at depths ranging from 14 feet to 45 feet bgs. Based on this assumption, the groundwater would be deep enough such that the project would not interfere with groundwater flow or expose any aquifers. The project will not impact aquifer recharge.
(Less Than Significant Impact)

4.9.2.3 *Water Quality*

Construction

Construction activities temporarily increase the amount of debris on-site and grading activities, which could increase pollutant loads of eroded material in stormwater runoff. There are no waterways on or adjacent to the project site; therefore, the impacts of increased pollutant loads in stormwater runoff on local waterways should be minimal.

Impact HYD-1 Construction activities could temporarily increase pollutant loads in stormwater runoff. **(Significant Impact)**

Mitigation Measures: In accordance with the City of Morgan Hill Standard Conditions of Approval and the General National Pollutant Discharge Elimination System Storm Water Permit for Construction Activities, the following measures have been included in the project to reduce potential construction-related water quality impacts.

MM HYD 1.1 Implementation of the following Pre-Construction Measures will reduce construction-related water quality impacts to a less than significant level:

- Burlap bags filled with drain rock will be installed around storm drains to route sediment and other debris away from the drains.
- Earthmoving or other dust-producing activities will be suspended during periods of high winds.
- All exposed or disturbed soil surfaces will be watered at least twice daily to control dust as necessary.
- Stockpiles of soil or other materials that can be blown by the wind will be watered or covered.
- All trucks hauling soil, sand, and other loose materials will be covered and all trucks will be required to maintain at least two feet of freeboard.
- All paved access roads, parking areas, staging areas and residential streets adjacent to the construction sites will be swept daily (with water sweepers).
- Vegetation in disturbed areas will be replanted as quickly as possible. **(Less Than Significant Impact with Mitigation)**

The project will be required to comply with the Nonpoint Source Pollution Program by preparing a SWPPP that includes best management practices (BMPs) prior to commencement of grading and construction activities.[46] Once grading begins, a SWPPP will be kept on-site and updated as needed while construction progresses. **(Less Than Significant Impact)**

Post- Construction

Stormwater from urban uses contains metals, pesticides, herbicides, and other contaminants such as oil, grease, lead, and animal waste. Runoff from the project site after development may contain oil and grease from parked vehicles, as well as sediment and chemicals (i.e., fertilizers, pesticides, etc.) from the landscaped areas or new roof areas. The project will be required to conform to the City's Stormwater Master Plan (SWMP) to help reduce the discharge of pollutants into waterways and to protect local water quality that could be impacted by stormwater and urban run-off within the corporate limits of Morgan Hill. Standard conditions relating to the design of the project will be imposed upon the approval of the project, and will implement the requirements of the SWMP.

[46] State Water Resources Control Board, Division of Water Quality. *Construction General Permit Fact Sheet*. Last Updated January 2013. Available at: <http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml>. Accessed March 26, 2013.

With implementation of the SWMP, the project will not have a significant operational impact on water quality. **(Less Than Significant Impact)**

4.9.2.4 *Flooding*

The site is within Zone X, which are areas of moderate flood hazard (0.2 percent chance of an annual flood), usually between the limits of the 100-year and 500-year floods. The City of Morgan Hill Flood Damage Prevention Ordinance (Section 18.42, Morgan Hill Municipal Code) only applies to "high risk areas" as described by FEMA (all types of Zone A's; one percent chance of flooding in a 100-yr period). The will be required to comply with the City of Morgan Hill's land development drainage standard (described previously); also, flooding might occur on the site, but only in the most extreme circumstances. **(Less Than Significant Impact)**

4.9.2.2 *Dam Failure*

The City of Morgan Hill is located in the dam failure inundation area of Anderson Dam. While the project site is subject to deep inundation should the Anderson Dam fail catastrophically, the dam is inspected twice a year by the SCVWD in the presence of representatives from the California Division of Safety of Dams and the Federal Energy Regulatory Commission. Furthermore, the Anderson Reservoir is managed to present significant damage during a maximum credible earthquake. While the potential inundation resulting from catastrophic dam failure could damage property and proposed structures within the project site and pose a severe hazard to public safety, the probability of such failure is extremely remote and reservoir levels have been lowered to maintain an additional level of safety; therefore dam inundation failure is not considered a significant hazard.[47] **(Less Than Significant Impact)**

4.9.2.3 *Seiches, Tsunamis, and Mudflows*

The project will not be at risk from damage due to sea waves or tsunamis. The project will not be subject to inundation by seiche, tsunami, or mudflow. The site is not in an area that could be exposed to inundation from sea level rise. **(No Impact)**

4.9.3 Conclusion

With compliance to the City's land development drainage standard, as well as implementation of a SWPPP, SWMP, and associated best management practices, the project will result in less than significant hydrology and water quality impacts. **(Less Than Significant Impact with Mitigation)**

[47] Santa Clara Valley Water District. *Reservoirs*. Available at: <http://www.valleywater.org/Services/Reservoirs.aspx>. Accessed May 16, 2013.

4.10 LAND USE

4.10.1 Setting

4.10.1.1 *Project Site*

The approximately 3.64-acre project site is currently undeveloped and includes landscaping, a public open space area, and an open space easement. The open space consists of non-native grassland, trees, a paved pathway, picnic benches, and a basketball court.

4.10.1.2 *Surrounding Land Uses*

Single-family residential developments comprised of one-and two-story structures border the northern and southern boundaries of the site. To the south of the site, a one-story senior assisted living residential building occurs within the single-family residential development. Calle Siena and East Main Avenue border the western and eastern boundaries of the site, respectively. Beyond both roads are single-family residential developments comprised of one- to two-story structures. The single-family residential development to the east of East Main Avenue includes an open space area with trees.

4.10.1.3 *General Plan and Zoning*

The project is designated as a *Single-Family Medium (3-5 du/ac)* in the City's General Plan and zoned as *R1-7000 Residential Planned Development (RPD)*.

Residential developments adjacent to the northern and southern boundaries of the site are designated as *Single-Family Medium (3-5 du/ac)* in the City's General Plan; the residential developments to the north are zoned as *R1-7000 RPD* and residences to the south are zoned as *R1-7000* and *R3 (with a Conditional (c) Overlay zone).* Residential developments to the west of Calle Siena and east of East Main Avenue are designated as *Single-Family Medium (3-5 du/ac)* in the City's General Plan and zoned as *R1-7000 RPD.*

4.10.1.4 *Santa Clara Valley Habitat Plan/Natural Communities Conservation Plan*

As previously described in Section 4.4, *Biological Resources*, the project site is located within the HCP/NCCP. Under the HCP/NCCP, the project is considered a private development 'covered activity' occurring in an Urban Development/Private Development Area.

4.10.2 Environmental Checklist and Discussion of Impacts

LAND USE					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
1) Physically divide an established community?	☐	☐	☐	☒	1,5
2) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐	1,2,3,5
3) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒	☐	1,2,10

4.10.2.1 *Land Use Impacts from the Project*

Land Use Conflicts

Land use conflicts can arise from two basic causes: 1) a new development or land use may cause impacts to persons or the physical environment in the vicinity of the project site or elsewhere; or 2) conditions on or near the project site may have impacts on persons or development introduced onto the site by the project. Both of these circumstances are aspects of land use compatibility. Potential incompatibility may arise from placing a particular development or land use at an inappropriate location, or from some aspect of the project's design or scope. Depending on the nature of the impact and its severity, land use compatibility conflicts can range from minor irritations and nuisance to potentially significant effects on human health and safety.

The project proposes a subdivision to allow for the construction of 12 single-family detached residential units and improvements to an existing open space area. The number of units proposed is in compliance with the *Single-Family Medium (3-5 du/ac)* designation. The variety of housing types is consistent with General Plan Policy 7i, that encourages a mix of housing types and lot sizes within residential projects with five or more lots or units. Additional improvements to the project site include the construction of new stormwater facilities, soundwalls and retaining walls, a new public street, and sidewalks. Improvements to the open space area will include a new concrete pathway to connect the new residential area to an existing concrete trail, stormwater treatment and retention areas, and landscaping improvements.

The project will maintain the existing *Single-Family Medium (3-5 du/ac)* General Plan land use designation. The project proposes to amend the *R1-7000 RPD* by approving a precise development plan to allow for certain exceptions to the existing site development standards of the zoning district.

Pursuant to the criteria set by the Zoning Code, Section 18.12.060 (E) the *R1-7,000* zoning district requires 20-foot front and rear setbacks for the first story on a residential unit, 25-foot front and rear setbacks for second stories, and for structures over 17 feet in height, a minimum side setback of 12.5 feet. Detached units must have a minimum lot width of 60 feet. The minimum lot depth on all parcels must be 85 feet and the maximum building coverage is 50 percent. The maximum building height is 2.5 stories, or 30 feet, whichever is less.

Most of the setback exceptions requested as part of the proposed precise development plan for the project are interior to the project or open areas, and will not affect existing homeowners of adjacent lots. Residential Lots 9 and 11 are the only lots proposed to have reduced side-yard and rear yard setbacks that share boundaries with adjacent residential properties (see Figure 3.2-1, *Site Plan)*. Lot 9 proposes a rear yard setback of 20 feet (approximately 5 feet below the minimum second-story setback requirement). Lot 11 proposes a side yard setback of 6 feet (6.5 feet below the second story standard).

The project is typical of suburban infill development where buildings are constructed in proximity to each other. The project will not result in the placement of an incompatible land use and will not result in a land use conflict with properties near the project site.

Residential development on the site will result in increased ambient noise levels in the project area; however, as discussed in Section 4.11, *Noise*, the introduced noise from vehicles and ordinary residential activities will not be at levels considered significant. Construction activities will result in temporary air quality and noise impacts to the surrounding residential developments. Sections 4.3 *Air Quality* and 4.11 *Noise*, of this Initial Study, discuss these impacts in detail and provide measures to reduce these impacts to a less than significant level.

The site is in a suburban setting predominantly characterized by one- and two-story single-family residential development. The project will increase residential development in an area that already has residential development and will not physically divide an established community. **(No Impact)**

Residential growth in Morgan Hill is ultimately controlled by the Residential Development Control System (RDCS) which was adopted for the purpose of mitigating environmental effects of growth in Morgan Hill. The RDCS generally limits development allotments to 250 residential units a year according to a point system based on a variety of factors including provision of public services, site planning, and architectural design considerations.

Given the metering effect of the RDCS, the project will not overwhelm the City's utility systems or induce unplanned residential development in the area that will result in a significant land use impact. With approval of the proposed PD, the project will not conflict with any applicable land use plan, policy, or regulation. **(Less than Significant Impact)**

4.10.2.2 *Impacts to the Proposed Project*

The site's Lots 8, 9, 10 and 11 share side and rear yard boundaries with adjacent residential land uses to the south. The project will not place new residential development adjacent to an incompatible land use such as a heavy industrial zone. Future residents of the site will be exposed to noise from

vehicles along East Main Avenue. With incorporation of measures listed in Section 4.11 *Noise*, impacts to future residents of the site from noise will be reduced to a less than significant level. Future residents of the site will not be significantly impacted by existing land uses in the project area. **(Less Than Significant Impact)**

4.10.2.3 *Santa Clara Valley Habitat Plan/Natural Communities Conservation Plan*

As discussed in Section 4.4 *Biological Resources*, the project site is included within the boundaries of the adopted HCP/NCCP. The project is not expected to impact covered species nor will it conflict with the HCP/NCCP objectives and provisions. **(Less Than Significant Impact)**

4.10.3 Conclusion

The reduced setbacks, lot widths, and lot sizes proposed by the project will not result in incompatible land use impacts. With RDCS allocation and incorporation of mitigation measures related to noise and air quality, the project will not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The project will not divide an established community. Therefore, the project will not result in significant land use impacts. **(Less Than Significant Impact)**

4.11 MINERAL RESOURCES

4.11.1 Setting

The State of California has protected mineral resource zones by implementing the Surface Mining and Reclamation Act of 1975.[48] The state's goals of the act include classifying mineral resources in California and providing local governments with the information needed to protect these resources. Local governments are responsible for designating lands that contain regionally significant mineral resources in local general plans in effort to protect these resources in areas of intensive competing land uses. Based on the City's General Plan, the project site does not consist of known mineral resources or mineral resource production areas.

4.11.2 Environmental Checklist and Discussion of Impacts

MINERAL RESOURCES					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
1) Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state?	☐	☐	☐	☒	1,2,29
2) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒	1,2

4.11.2.1 *Impacts to Mineral Resources*

The project should not result in the loss of availability of known mineral resources of value to the City of San Carlos and the residents of the California. The site is not a locally-important mineral resource recovery site delineated in the City's General Plan. **(No Impact)**

4.11.3 Conclusion

The project would not result in a significant impact from the loss of availability of a known mineral resource. **(No Impact)**

[48] California Department of Conservation, Office of Mine and Reclamation. *Surface Mining and Reclamation Act and Associated Regulations*. January 2007. Available at: <http://www.conservation.ca.gov/omr/smara/Documents/010107Note26.pdf>. Accessed March 5, 2013.

4.12 NOISE

The following is based upon an *Environmental Noise Assessment* prepared by Illingworth & Rodkin, Inc. in April, 2013. The assessment is attached to this Initial Study as Appendix F.

4.12.1 Setting

4.12.1.1 *Noise Background*

Noise is defined as unwanted sound. Noise can be disturbing or annoying because of its pitch or loudness. Pitch refers to relative frequency of vibrations, higher pitch signals sound louder to people.

A decibel (dB) is measured based on the relative amplitude of a sound. A 10 on the decibel scale marks the lowest sound level that a healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis such that each 10 decibel increase is perceived as a doubling of loudness. The California A-weighted sound level, or dBA, gives greater weight to sounds to which the human ear is most sensitive.

Sensitivity to noise increases during the evening and at night because excessive noise interferes with the ability to sleep. Twenty-four hour descriptors have been developed that emphasize quiet-time noise events. The Day/Night Average Sound Level, DNL or L_{dn}, is a measure of the cumulative noise exposure in a community. It includes a 10 dB addition to noise levels from 10:00 PM to 7:00 AM to account for human sensitivity to night noise.

4.12.1.2 *Applicable Noise Standards*

The City of Morgan Hill General Plan Acceptable Noise Levels standards state that the normally acceptable interior noise level for residential uses is 45 dBA L_{dn}. General Plan Policy 7a states that noise levels in new residential development exposed to an exterior L_{dn} of 60 dBA or greater should be limited to maximum instantaneous noise levels, $L_{max,}$ (e.g., trucks on busy streets, train warning whistles) in bedrooms of 50 dBA L_{max}. Maximum instantaneous noise levels in all other habitable rooms should not exceed 55 dBA. The maximum outdoor noise level for new residences near the railroad shall be 70 dBA L_{dn}, recognizing that train noise is characterized by relatively few loud events. The City's standards for acceptable exterior noise levels are 60 dBA L_{dn} in single-family residential use areas and 70 dBA L_{dn} for playgrounds, neighborhood parks, agriculture and several types of outdoor recreation. General Plan Policy 7a also states that where the City determines that providing an L_{dn} of 60 dBA or lower cannot be achieved after the application of reasonable and feasible mitigation, an L_{dn} of 65 dBA may be permitted.

Additionally, the 2010 California Building Code has established a 60 dBA L_{dn} exterior noise threshold for new dwellings other than detached single-family housing, and an interior noise threshold of 45 dBA L_{dn} applicable to any habitable room.

4.12.1.3 *Existing Noise Environment*

The predominant noise source that currently affects the site is local roadway traffic along East Main Avenue. A noise monitoring survey was completed at the site from January 29, 2013 to January 31, 2013. The survey consisted of one long-term noise measurement and two short-term noise

measurements (see Figure 4.12-1). Noise levels were monitored with Larson-Davis Laboratories Model 820 integrating sound level meters.

The long-term noise measurement LT-1 was approximately 95 feet from the center of East Main Avenue (see Figure 4.12-1). The measurement was used to quantify the daily trend in noise levels attributable to traffic along the roadway. Hourly average noise levels typically ranged from 58 to 64 dBA L_{eq} during the day, and from 48 to 60 dBA L_{eq} at night. The L_{dn} at this location was 63 dBA. Long-term noise measurement data was collected from January 29 to January 31, 2013.

Short-term noise measurements were completed at the ST-1 and ST-2 locations on January 31, 2013 (see Figure 4.12-1). Table 4.12-1 summarizes the results of these short-term measurements.

Table 4.12-1
Short-Term Noise Measurement Data (January 31, 2013)

Noise Measurement Location	Time	Maximum Noise Level during Measurement Period (L_{max})	Average Noise Level (L_{eq})	Day/Night Noise Level (L_{dn})
ST-1: Northwestern most portion of site, approximately 100 feet east of Calle Siena.	10:40-10:50 AM	63	48	<55
ST-2: Adjacent to the western property line.	10:40-10:50 AM	54	47	<55
Note: L_{dn} approximated by correlating to corresponding period at long-term site.				

4.12.1.4 *Vibration Background*

Ground vibration is often measured in peak particle velocity (PPV). PPV amplitudes are used to evaluate human response to vibration. In this section, a PPV descriptor with units of inches/second is used to evaluate construction generated vibration for building damage and human complaints. Construction activities can cause vibration that varies in intensity. The use of pile driving and vibratory compaction equipment typically generates the highest construction related ground-borne vibration levels. Construction-induced vibration has the potential to damage structures and can be an annoyance to humans. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 in/sec PPV. Construction-induced vibration that causes structural damage is rare and has only been observed in instances where the structure is in highly poor condition where the construction activity occurs immediately adjacent to the structure. Based on the Caltrans *Transportation- and Construction-Induced Vibration Guidance Manual*[49], construction-induced vibration is barely perceptible by humans at 0.01in/sec PPV, distinctly perceptible to strongly perceptible from at 0.04 in/sec to 0.1 in/sec PPV, and strongly perceptible to severe from 0.1in/sec to 0.5 in/sec PPV. Groundborne vibration levels exceeding 0.3 in/sec PPV (peak particle velocity) would have the potential to result in "architectural" damage to normal buildings.

[49] California Department of Transportation. *Transportation- and Construction-Induced Vibration Guidance Manual.* June 2004. Available at: <http://www.dot.ca.gov/hq/env/noise/pub/vibrationmanFINAL.pdf>. Accessed March 14, 2013.

NOISE MEASUREMENT LOCATIONS

FIGURE 4.12-1

4.12.2 Environmental Checklist and Discussion of Impacts

NOISE					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project result in:					
1) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐	1,2,30
2) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐	1,30
3) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	1,30
4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐	1,30
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, will the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	1,22, 30
6) For a project within the vicinity of a private airstrip, will the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	1,22, 30

The CEQA Guidelines state that a project will normally be considered to have a significant impact if noise levels conflict with adopted environmental standards or plans, or if noise levels generated by the project will substantially increase existing noise levels at noise-sensitive receivers on a permanent or temporary basis. CEQA does not define what noise level increase should be substantial. A 3 dBA noise level increase is considered the minimum increase that is perceptible to the human ear. Typically, project-generated noise level increases of 3 dBA L_{dn} or greater are considered significant where resulting exterior noise levels will exceed the normally acceptable noise level standard. Where noise levels will remain at or below the normally acceptable noise level standard with the project, a noise level increase of 5 dBA L_{dn} or greater is considered significant.

4.12.2.1 *Impacts to the Proposed Project*

Exterior Noise Levels

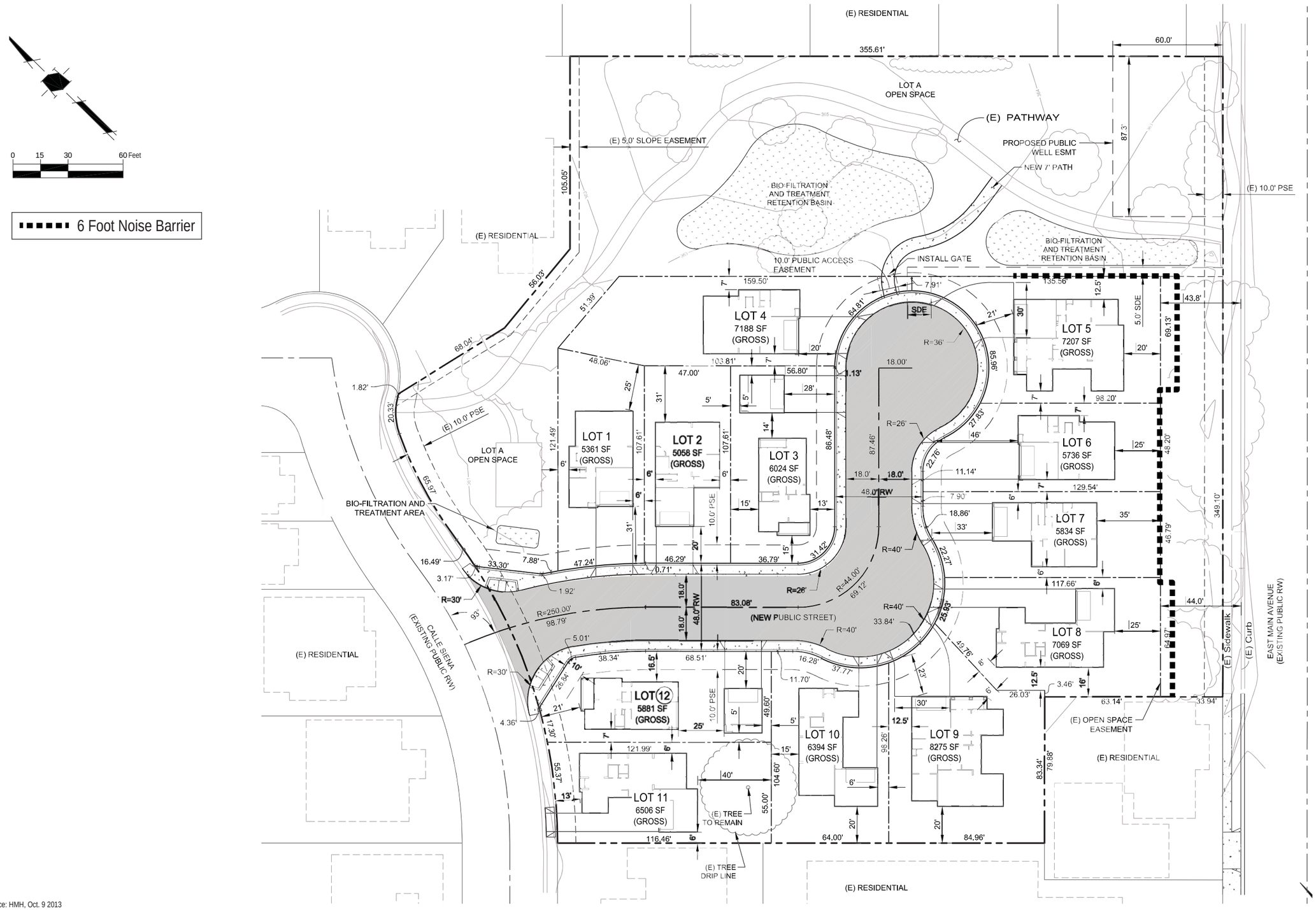
The future noise environment at the site would continue to primarily result from vehicular traffic along East Main Avenue. For the purposes of this analysis, a 1 dBA L_{dn} noise level increase (approximately 26% increase in traffic volumes) is assumed along East Main Avenue to represent future growth in the area. Based on this consideration, worst-case future noise levels are estimated to reach 64 dBA L_{dn} at a distance of 85 feet from the centerline of East Main Avenue, the setback of the project's nearest residential units to the roadway. These levels are within the "conditionally acceptable" category for noise and residential land use compatibility.

Noise levels in outdoor use areas that are affected by transportation noise are required to be maintained at or below 60 dBA L_{dn} to be considered acceptable for residential development. Noise levels (L_{dn}) in the nearest outdoor use areas of residential uses adjoining East Main Avenue would exceed the 60 dBA L_{dn} standard by up to 4 dBA L_{dn}. Rear yard areas throughout the remainder of the site would be shielded by intervening structures (i.e., existing and proposed residences) and would be exposed to noise levels less than 60 dBA $L_{dn.}$

Impact NOI-1 Future exterior noise levels adjacent to East Main Avenue could exceed the City's noise and land use compatibility standards and the threshold for acceptable exterior noise levels for single-family housing per the 2010 California Building Code. **(Significant Impact)**

Mitigation Measure: The following mitigation measure will reduce exterior noise at residences adjacent to East Main Avenue to a less than significant level:

MM NOI-1.1 Construct six-foot noise barriers to reduce East Main Avenue traffic noise levels to less than 60 dBA Ldn. Noise barriers shall be located adjacent to the residences (Lots 5-8) on East Main Avenue as shown in Figure 4.12-2, and the barrier height shall be measured relative to the residential pad elevation. The barrier shall be free of cracks or gaps over the face and at the base of the barrier and shall be constructed from materials with a minimum surface weight of three pounds (lbs)/s.f. **(Less Than Significant Impact with Mitigation)**



Source: HMH, Oct. 9 2013

NOISE BARRIER LOCATION

FIGURE 4.12-2

Interior Noise Levels

The California Building Code and City of Morgan Hill require that interior noise levels within new residential units be maintained at or below 45 dBA L_{dn}. The City of Morgan Hill also requires new residential development exposed to an exterior L_{dn} of 60 dBA or greater to reduce maximum instantaneous noise levels (e.g., trucks on busy streets, train warning whistles) in bedrooms to 50 dBA L_{max}. Maximum instantaneous noise levels in all other habitable rooms should not exceed 55 dBA L_{max}. Residential units proposed along East Main Avenue would be exposed to exterior noise levels of approximately 64 dBA L_{dn}.

In buildings of typical construction, with the windows partially open, interior noise levels are approximately 15 dBA lower than exterior noise levels. With the windows closed, standard residential construction typically provides 20 to 25 decibels of exterior to interior noise reduction.

Given the anticipated noise levels at exterior facades adjacent to project roadways, standard residential construction methods, and the inclusion of a suitable form of forced-air mechanical ventilation, would achieve interior noise levels of 45 dBA L_{dn} or less. Standard construction methods with the windows closed would also be sufficient to reduce typical interior maximum instantaneous noise levels below 50 dBA in bedrooms and 55 dBA in all other habitable rooms.

Impact NOI-2 Future interior noise levels at the site could exceed the City's noise and land use compatibility standards and the threshold for acceptable noise levels for residential uses per the 2010 California Building Code. **(Significant Impact)**

Mitigation Measures: The following mitigation measures will reduce interior noise at the project's residential developments closest to East Main Avenue to a less than significant level.

MM NOI-2.1 A suitable form of forced-air mechanical ventilation, as determined by the local building official, shall be provided for residential units located on Lots 5, 6, 7 and 8, so that windows can be kept closed at the occupant's discretion to control interior noise and achieve the interior L_{max} and L_{dn} noise standards.

A project-specific design-level Acoustical Analysis shall be completed by a qualified acoustical consultant to confirm that the final project design including site plans, building elevations, and floor plans will result in interior noise levels of 45 dBA L_{dn} or lower and an L_{max} of 50 dBA or lower in bedrooms and 55 dBA or lower in all other habitable rooms. Special building techniques (e.g., sound-rated windows and building façade treatments) will be required to maintain interior noise levels at or below acceptable levels. These treatments will include, but are not limited to, sound rated windows and doors, sound rated wall constructions, acoustical caulking, protected ventilation openings, etc. Recommendations for noise insulation treatments will be on a unit-by-unit basis. The results of the Acoustical Analysis including recommendations for noise control treatments, shall be submitted, reviewed, and approved of by the City prior to issuance of a building permit.
(Less Than Significant Impact with Mitigation)

Other Noise Impacts

The site is not located in the Comprehensive Land Use Plan's South County Airport Influence Area (AIA) or in the vicinity of a private airstrip. The project will not, therefore, expose future residents of the site to excessive noise from air traffic. **(Less Than Significant Impact)**

4.12.2.2 *Impacts from the Proposed Project*

Traffic

The increased number of vehicle trips to and from the project site will not be substantial (approximately 115 new daily trips) and will not result in an increase in ambient noise levels in the project area. Traffic typically has to double in order to result in a 3 dBA noise level increase. Traffic volumes will slightly increase with implementation of the project as compared to existing conditions. Traffic noise levels will increase by less than 1 dBA L_{dn} as a result of the project. This noise level increase would not be measurable or noticeable. (**Less Than Significant Impact)**

Construction Noise

Construction activities generate considerable amounts of noise. Construction of the residences could result in short term noise impacts. Construction-related noise levels are normally highest during the site preparation phase and during the construction of infrastructure. The highest maximum instantaneous noise levels generated by project construction activities would typically range from about 90 to 95 dBA L_{max} at a distance of 50 feet from the noise source. Typical hourly average construction generated noise levels are about 81 dBA to 88 dBA measured at a distance of 50 feet during busy construction periods (e.g., earth moving equipment, impact tools). Construction-related noise levels are normally less during building, finishing, and landscaping phases. Construction generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor. Shielding by buildings or terrain often result in lower construction noise levels at distant receptors.

Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day, the construction occurs in areas immediately adjoining noise sensitive land uses, or when construction durations last over extended periods of time. Where noise from construction activities exceeds 60 dBA L_{eq} and exceeds the ambient noise environment by at least 5 dBA L_{eq} at noise-sensitive uses in the project vicinity for a period of one year or more, the impact will be considered significant. Limiting the hours when construction can occur is often a simple method to reduce the potential for noise impacts.

Typically, significant noise impacts do not result when standard construction noise control measures are enforced at the project site and when the duration of the noise generating construction period is limited to one construction season (typically one year) or less. Noise generated by grading, infrastructure improvements, and the construction of building shells will not result in noise levels exceeding 60 dBA $L_{eq,}$ nor will it increase the ambient noise environment by 5 dBA L_{eq} for a period greater than one year.

Impact NOI-3 Construction activities at the site will result in temporary noise impacts to adjacent residential development. **(Significant Impact)**

Mitigation Measures: The following mitigation measure will reduce temporary noise impacts from construction at the project site to a less than significant level.

MM-NOI 3.1 The following mitigation measures shall be implemented during all phases of construction.

- Construction activities shall be limited to the hours between 7:00 AM and 8:00 PM Monday through Friday, and between the hours of 9:00 AM and 6:00 PM on Saturdays. No construction activities should occur on Sundays or federal holidays (Consistent with Section 8.28.040 of the Morgan Hill Municipal Code).
- All internal combustion engine driven equipment shall be equipped with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Stationary noise generating equipment (e.g. rock crushers, compressors) shall be located as far as possible from adjacent residential receivers.
- Stationary equipment located near residential receivers shall be acoustically shielded with temporary noise barriers or recycled demolition materials.
- "Quiet" air compressors and other stationary noise sources where technology exists shall be utilized.
- The contractor shall prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.
- A "disturbance coordinator" who would be responsible for responding to any complaints about construction noise shall be designated. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem.

  (Less Than Significant Impact with Mitigation)

Groundborne Vibration

Construction of the project could generate perceptible vibration when heavy equipment or impact tools (e.g. jackhammers, hoe rams) are used. Construction activities will include site preparation work, foundation work, and new building framing and finishing. The project will not require pile driving, which can lead to excessive vibration.

California Department of Transportation (Caltrans) has established a vibration limit of 0.5 inches/second, peak particle velocity (in/sec, PPV) for buildings structurally sound and designed to modern engineering standards, 0.3 in/sec, PPV for buildings that are found to be structurally sound

but where structural damage is a major concern, and a conservative limit of 0.08 in/sec, PPV for ancient buildings or buildings that are documented to be structurally weakened.

Table 4.12-2 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet. Construction activities such as drilling, the use of jackhammers, high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) could generate substantial vibration in the immediate vicinity. Construction activities are expected to occur for one construction season, however, construction vibration would not be substantial during most of the season. Jackhammers typically generate vibration levels of 0.035 in/sec PPV and drilling typically generates vibration levels of 0.09 in/sec PPV at a distance of 25 feet. Vibration levels would vary depending on soil conditions, construction methods, and equipment used. Vibration levels would be expected to be 0.2 in/sec PPV or less, below the 0.3 in/sec PPV significance threshold. Vibration generated by construction activities near the common property line would at times be perceptible, however, would not be expected to result in "architectural" damage to these buildings.

Table 4.12-2
Vibration Source Levels for Construction Equipment

Equipment		**PPV at 25 feet (ft) (inches/second)**	**Approximate L_v[1] at 25 ft (VdB[2])**
Pile Driver (Impact)	upper range	1.158	112
	typical	0.644	104
Pile Driver (Sonic)	upper range	0.734	105
	typical	0.170	93
Clam shovel drop		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Notes
[1] L_v = Velocity level
[2] VdB = Vibration decibels
Source: Transit Noise and Vibration Impact Assessment, United States Department of Transportation Office of Planning and Environment, Federal Transit Administration, May 2006.

While the project will not result in structural damage to existing buildings from vibration during construction, vibration levels may still be perceptible. The vibration will not be considered significant given the intermittent and short duration of the construction phases that have the highest potential to produce vibration (demolition and use of jackhammers and other high power tools). Use of administrative controls such as notifying adjacent residences of scheduled construction activities and scheduling construction activities with the highest potential to produce perceptible vibration to hours with the least potential to affect sensitive uses, will reduce the impacts from perceptible vibration to a less than significant level. **(Less Than Significant Impact)**

4.12.3 Conclusion

Implementation of the listed mitigation measures will reduce noise impacts from development of the site to a less than significant level. **(Less Than Significant Impact with Mitigation)**

4.13 POPULATION AND HOUSING

4.13.1 Setting

The Morgan Hill General Plan assumes an average of 3.08 persons per single-family residential unit. The City's population in 2010 was 37,882[50] and is projected to grow to 45,800 by 2030.[51]

As part of the General Plan, residential development within the City of Morgan Hill is controlled by the Residential Development Control System (RDCS). By approving Measure C in 2004 and Measure F in 2006, Morgan Hill voters extended the City's RDCS to 2020. RDCS establishes a population ceiling for the City of 48,000 as of January 1, 2020.

4.13.2 Environmental Checklist and Discussion of Impacts

POPULATION AND HOUSING					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
1) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐	1,2,3
2) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	1,2,3
3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	1,2,3

4.13.2.1 *Impacts from the Project*

The project proposes the construction of 12 single-family housing units and improvements to an open space area on the project site. There is no housing on the project site.

Assuming 3.08 persons per household for each residential unit, based on the City of Morgan Hill's *Housing Element* of the General Plan, the project will generate a maximum of 37 new residents.[52]

As explained previously, residential growth in Morgan Hill is ultimately controlled by the RDCS which was adopted for the purpose of controlling impacts from rapid growth in Morgan Hill. The RDCS generally limits 250 units to be built each year according to a competitive process involving a criteria and point system that address a variety of factors of the project including provision of public

[50] U.S. Census Bureau, 2010 Census of Population. State & County QuickFacts: Morgan Hill (City). Last Modified January 2013. Available at: <http://quickfacts.census.gov/qfd/index.html>. Accessed March 26, 2013.
[51] Association of Bay Area Governments (ABAG), *Projections and Priorities 2009: Building Momentum, San Francisco Bay Area Population, Household, and Job Forecasts.* August, 2009.
[52] City of Morgan Hill. *Housing Element*. September 2010.

services, site planning, and architectural design considerations. Population growth resulting from the proposed 12 residential units will be a part of the 250 new units allowed through the RDCS in a given year. The project proposes *Planned Development (PD)* and will not induce substantial unplanned residential development in the area. **(Less Than Significant Impact)**

4.13.3 Conclusion

Residential development of the site with 12 residences will not result in a substantial increase in population in the City of Morgan Hill above projected population levels nor will it induce unplanned residential development in the area. **(Less Than Significant Impact)**

4.14 PUBLIC SERVICES

4.14.1 Setting

4.14.1.1 *Fire Service and Emergency Medical Services*

The City of Morgan Hill contracts with the California Department of Forestry and Fire Protection (CalFire) for fire and emergency medical services. The City is served by three stations at the following locations (the first two are owned by the City of Morgan Hill; the last one is owned by CalFire): 1) El Toro Fire Station, located at 18300 Old Monterey Road (approximately 0.40 miles southeast of the project site), 2) Dunne Hill Fire Station, located at 2100 East Dunne Avenue (approximately 4.0 miles southeast of the project site), and 3) 15670 Monterey Street (approximately 3.0 miles south of the project site). In general, the response time meets the current standard of eight minutes 95% of the time; although most responses are approximately five minutes 90% of the time.[53]

4.14.1.2 *Police Service*

Police service is provided to the site by the City of Morgan Hill Police Department. The Morgan Hill Police facility is located at 16200 Vineyard Boulevard, approximately 1.5 miles south of the project site. The department employs 36 sworn officers. The Police Department's goal is to respond to Priority One calls within five minutes and Priority Two calls within 10 minutes. Priority One calls are reports of a crime in progress or where an injury has occurred and Priority Two calls are reports of felonies and other major calls.

4.14.1.3 *Schools*

The project site is located within the Morgan Hill Unified School District. The District has eight elementary schools, two middle schools, two comprehensive high schools, one continuation high school, and a community adult school, as well as a home schooling program. Future residents of the project site will be served by El Toro Elementary School (approximately 0.2 miles southwest of the site), Britton Middle School (approximately 0.7 miles southwest of the site), and Live Oak High School (approximately 0.9 miles northeast of the site).

4.14.1.4 *Parks*

The City owns 70 acres of developed parkland (including the Civic Center, assessment district parks and city owned trails) and 59 acres of recreation facilities. Included within this inventory, the City maintains two community parks, five neighborhood parks, two neighborhood/school parks, and 15 mini-parks, in addition to its public trail system and open space. In addition to publicly-owned parkland, there is also a significant amount of recreational land and open space in the City that is privately owned and maintained. Under the City's General Plan Policy 18c, fifty percent of the private homeowners association (HOA) recreational acreage is counted toward meeting the General Plan goal of five acres per thousand population. Additionally, the General Plan allows for10 percent of open space to be counted towards meeting this goal. In combination, these various types of public

[53] City of Morgan Hill. City Council Staff Report. *Fire and Emergency Medical Services (EMS) CalFire Proposal Update*. Meeting Date April 4, 2012.

and private parks and recreational facilities in the City of Morgan Hill total about 200 acres to serve an estimated population of 37,882. This exceeds the City's goal of five acres of parkland per 1,000 capita.

The City also owns and operates special use facilities for recreational purposes. These facilities include the Morgan Hill Aquatics Center, Community and Cultural Center, the Centennial Recreation Center, the 38-acre Outdoor Sports Center, and Skateboard/BMX park. Many sports leagues and teams use Morgan Hill School District facilities after school hours and on weekends. These facilities include 12 baseball/softball fields, two football fields, two tracks, and four swimming pools. Morgan Hill residents also utilize County and State parks. These parks include Silveira Park at the southern end of the City, the Coyote Creek park chain to the north, and Henry Coe State Park to the east.

4.14.2 Environmental Checklist and Discussion of Impacts

PUBLIC SERVICES					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project: 1) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
Fire Protection?	☐	☐	☒	☐	1,2
Police Protection?	☐	☐	☒	☐	1,2
Schools?	☐	☐	☒	☐	1,2
Parks?	☐	☐	☒	☐	1,2
Other Public Facilities?	☐	☐	☒	☐	1

4.14.2.1 *Fire and Police Service*

Future residences will be constructed in conformance with current building and fire codes, including features that will reduce potential fire hazards. Review of the project by the CalFire and the Morgan Hill Police Department will incorporate appropriate safety features to reduce fire hazards and criminal activity.

The project is located in a suburban area and future residential development on the site will not substantially increase the demand for fire and police protection, or require construction or expansion of fire or police facilities. **(Less Than Significant Impact)**

4.14.2.2 *Schools*

Future residential development on the site will increase the population of the project area and will, therefore, increase demand on local schools. Using the Morgan Hill Unified School District's student generation rate of 0.4732 students for single-family detached housing,[54] the proposed 12 residential single-family detached units will generate approximately six students at full build-out. The nearby schools have capacity to serve the additional students generated by this project.

State Law (Government Code Section 65996) specifies that an acceptable method of offsetting a project's effect on the adequacy of school facilities is payment of a school impact fee prior to issuance of a building permit. The school impact fees implementation of measures specified in Government Code Section 65996 will be used to offset project-related increase in student enrollment. The proposed project will be required to comply with the school impact fee requirements of the Morgan Hill Unified School District. **(Less Than Significant Impact)**

4.14.2.3 *Parks*

The project will allow for the construction of 12 single-family residential units. The average number of persons per household in Morgan Hill is 3.08 and future residential development on the site could generate up to 37 residents. If the City's parkland goal of five acres per 1,000 residents is implemented, the residential development project would be required to provide approximately 0.19 acres of public parkland. Since the acreage for the site is small in size, the project will not develop public parklands. Additionally, public parks administered by the City's Recreation and Community Services Division are within 0.5 miles of the site and will be available to all residents.

The City of Morgan Hill has adopted a parkland dedication/park land in-lieu fee ordinance (Municipal Code Chapter 17.28) that requires parkland dedication or in-lieu fees for residential developments. This ordinance requires residential developers to dedicate public parkland or pay in-lieu fees, or both, to offset the demand for neighborhood parkland created by their housing developments. The project will be required to comply with the City's parkland dedication or in-lieu fees for residential developments, which will avoid significant impacts to the City's park facilities. **(Less Than Significant Impact)**

4.14.3 Conclusion

With review of the project design by the Police and Fire departments, payment of school impact fees, and compliance to the City's parkland dedication/parkland in-lieu fee ordinance, the project will reduce public services impacts to a less than significant level. **(Less Than Significant Impact)**

[54] Anessa Pasillas, Supervisor of Maintenance, Morgan Hill Unified School District. E-mail: *RE: Student Generation Rates*. July 28, 2011.

4.15 RECREATION

4.15.1 Setting

The City owns 70 acres of developed parkland (including the Civic Center, assessment district parks and city owned trails) and 59 acres of recreation facilities. Included within this inventory, the City maintains two community parks, five neighborhood parks, two neighborhood/school parks, and 15 mini-parks, in addition to its public trail system and open space.[55] In addition to publicly-owned parkland, there is also a significant amount of recreational land and open space in the City that is privately owned and maintained. Under the City's General Plan Policy 18c, fifty percent of the private homeowners association (HOA) recreational acreage is counted toward meeting the General Plan goal of 5.0 acres per thousand population. Additionally, the General Plan allows for 10 percent of open space to be counted towards meeting this goal. In combination, these various types of public and private parks and recreational facilities in the City of Morgan Hill total about 200 acres to serve an estimated population of 37,882. This exceeds the City's goal of five acres of parkland per 1,000 capita.

The City also owns and operates special use facilities for recreational purposes. These facilities include the Morgan Hill Aquatics Center, Community and Cultural Center, the Centennial Recreation Center, the 38 acre Outdoor Sports Center, and Skateboard/BMX park. Many sports leagues and teams use Morgan Hill School District facilities after school hours and on weekends. These facilities include 12 baseball/softball fields, two football fields, two tracks, and four swimming pools.

The City's General Plan has a parks and recreation goal to provide useful, accessible and high-quality parks, recreation, and trail facilities programs. To achieve this goal, the City has adopted a parkland dedication/park land in-lieu fee ordinance (Municipal Code Chapter 17.28) that requires parkland dedication or in-lieu fees for residential developments.

4.15.2 Environmental Checklist and Discussion of Impacts

RECREATION					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
1) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated?	☐	☐	☒	☐	1,2
2) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐	1,2

[55] Rymer, Steve. Director of Recreation and Community Services, City of Morgan Hill. Email Communication September 20, 2011.

4.15.2.1 *Impacts to Park and Recreational Facilities*

Future residential development could generate up to 37 residents for the project. Using the City's parkland goal of five acres per 1,000 residents, the construction of 0.19 acres of public parkland would be required for the project. Given the small acreage of the project site, the construction of public parkland for the project will not be required; instead fees will be paid to develop parkland elsewhere. In addition, given the small number of potential residents generated from the project, the increased use of existing regional parks would not lead to an adverse physical effect on the environment. **(Less Than Significant Impact)**

Recreational facilities are within five miles of the project site. The recreational facilities have the capacity to serve the project's future residents. The project will not have adverse physical effects on existing recreational facilities due to the small number of residents that can be generated from the project. **(Less Than Significant Impact)**

4.15.3 Conclusion

Due to the small number of potential residents generated from the project and the payment of in-lieu fees, the project will not result in significant impacts to recreational facilities in the City of Morgan Hill. **(Less Than Significant Impact)**

4.16 TRANSPORTATION

4.16.1 Setting

4.16.1.1 *Regional and Local Roadway Access*

The regional and local roadway network providing access to the project site is described below.

U.S. Highway 101 (US 101) is a north-south freeway that serves as the primary roadway connection between Morgan Hill and all other areas of Santa Clara County. US 101 extends north to San Francisco and south to Los Angeles. The freeway includes six lanes (three mixed-flow lanes in each direction) within most of Morgan Hill. North of Cochrane Road, US 101 widens to eight lanes including three mixed-flow lanes and one high occupancy vehicle (HOV) lane in each direction. HOV lanes, also known as diamond or carpool lanes, restrict use to vehicles with two or more persons (carpool, vanpool, and buses) or motorcycles during the morning (5:00 AM to 9:00 AM) and evening (3:00 PM to 7:00 PM) commute periods. The Cochrane Road interchange provides primary access to the project site.

Main Avenue is a roadway that extends from John Telfer Drive to Coyote Road, an approximately three mile roadway from west to east. Main Avenue serves as a two-lane arterial roadway with a posted of 30 mph between John Telfer Drive and Hale Avenue. Monterey Road (where West Main Avenue changes to East Main Avenue). East Main Avenue serves as a two-lane arterial between Monterey Road and Hill Road with intermittent bicycle lanes in the east and west directions of the roadway. Between Hill Road and Coyote Road, East Main Avenue serves as a two-lane collector road with speed limits ranging from 20 to 40 mph.

Cochrane Road an arterial roadway that extends from Monterey Road east to Coyote Road (approximately 700 feet west of Anderson Lake) in the east west direction. Cochrane Road is a two to six-lane roadway that provides an interchange with US 101 at the north end of the city. The speed limit is 45 mph.

Butterfield Road is a four lane (two lanes in each direction) arterial roadway extending from Cochrane Road (north) to Tennant Avenue from the north to south direction, and provides left-turn lanes into the intersecting local streets. The roadway has a bicycle lane in each direction. The posted speed limit is 45 mph.

Monterey Road/Highway, through Morgan Hill, is generally a four-lane arterial roadway with separate left-turn lanes at intersections and on-street parking in some areas. Monterey Road extends from San José through the downtown area of Morgan Hill to the City of Gilroy. The speed limit on Monterey Road varies from 45 miles per hour (mph) north of Cochrane Road to 25 mph between Main Avenue and East Dunne Avenue in downtown. Several sets of speed lumps slow traffic through the downtown area.

Dunne Avenue is a roadway that extends from the bottom and east side of El Toro Mountain (approximately 0.2 miles west of the West Dunne Avenue and John Telfer Drive intersection) to Corral Trail at Henry W. Coe State Park, an approximately 15 mile roadway from west to east. The West Dunne roadway serves as a two-direction collector roadway from the bottom of El Toro

Mountain to Peak Avenue. West Dunne then changes to a two-way arterial roadway from Peak Avenue to Monterey Road (where West Dunne Avenue changes to East Dunne Avenue). East Dunne serves as a four-lane major arterial roadway between Monterey Street and Hill Road. East Dunne merges into a two-lane arterial roadway at the Hill Road intersection and serves as a two-lane arterial roadway between Hill Road and Holiday Drive. Dunne/East Dunne Avenue serves as a collector roadway that leads to Henry W. Coe Park between Holiday Drive and Corral Trail. Arterial roadway speed limits range from 25 to 40 mph and the collector roadway limits are 25 mph or less.

Central Avenue serves as a two lane roadway that extends from West Central Avenue and Del Monte Avenue to the East Central Avenue approximately 60 feet west of the UPRR railroad tracks in the west to east direction. East Central Avenue continues 30 feet east of the UPRR railroad tracks to Serene Drive; bicycle lanes exist in both directions of this extension. The roadway is a collector road that totals approximately one mile with a 25 mph speed limit.

Grand Prix Way is a two-lane residential roadway that extends from East Central Avenue to Diana Avenue from north to south. The roadway is approximately 0.6 miles with a 25 mph speed limit.

Calle Siena is a two-lane residential roadway that extends from approximately 270 feet south of the Calle Siena and Grand Prix Way intersection to the Calle Siena and Ashton Court intersection from southwest to northeast (approximately 0.2 miles). The speed limit is not posted on the road but has a standard residential speed limit of 25 mph.

4.16.1.2 *Existing Transit Service*

Bus Routes

The Santa Clara Valley Transportation Authority (VTA), the Congestion Management Agency for Santa Clara County, operates fixed route, commuter, and paratransit bus service and light rail service (LRT) in Santa Clara County. VTA provides two bus routes (one local and one regional) that serve the project area. Monterey Salinas Transit (MST) operates transit service in Monterey County, and provides express bus service to Morgan Hill and San Jose.

Existing transit service near the project is illustrated on Figure 4.16-1 and is discussed below. Currently VTA Route 16 provides four transit stops and VTA Route 68 provides two transit stops within a half-mile of the project site.

Route 16, a local community bus, provides service between the Morgan Hill Civic Center and Burnett Avenue. Near the project site, Route 16 operates along East Main Avenue and Cochrane Road. Additionally, this bus line has eight bus stops on East Main Avenue within one-half of a mile. Weekend service is not available.

Route 68, a regional bus route, provides service through Morgan Hill via Hale Avenue, Main Avenue and Monterey Road. Near the project site, Route 68 provides connections with the Main and Hale Transit Center in Morgan Hill. The bus line also has four bus stops on Main Avenue within one-half of mile. Weekend service is available.

Route 121 operates through Morgan Hill via Highway 101, Cochrane Road, Butterfield Boulevard, Dunne Avenue and Monterey Road. Near the project site, Route 121 provides connections with the Morgan Hill Caltrain Station. Weekend service is not available.

Route 168 operates through Morgan Hill via Highway 101, Cochrane Road, Butterfield Boulevard, Dunne Avenue and Monterey Road. Near the project site, Route 121 provides connections at the Morgan Hill Caltrain Station. Weekend service is not available.

MST 55 Monterey - San Jose Express operates through Morgan Hill via Highway 101, Dunne Avenue and Butterfield Boulevard. The MST 55 provides connections at the Morgan Hill Caltrain Station. Weekend service is not available.

Caltrain Service

Caltrain provides regular train service between San José and San Francisco. Service extends south to Gilroy through Morgan Hill during commute periods, with three northbound trips during the AM peak period and three southbound trips during the PM peak period stopping at both the Gilroy and Morgan Hill Caltrain Stations. The Morgan Hill Caltrain Station is located east of Depot Street between First and Second Streets, approximately 0.6 miles from the project site.

4.16.1.3 *Existing Pedestrian and Bicycle Facilities*

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signals, and off-street paths that are meant to provide safe and convenient routes for pedestrians to access destinations such as institutions, businesses, public transportation, and recreation facilities.

In the vicinity of the project site, marked crosswalks are not provided on any segments of the East Main Avenue/Belletto Drive intersection; however, stop signs are located in both directions of Belletto Drive. Crosswalks do occur on the Main Avenue/Grand Prix Way intersection parallel to East Main Avenue and crossing East Main on the northwest. There is no crosswalk that transects East Main Avenue connecting pedestrian sidewalks to the northeast of the Main Avenue/Grand Prix Way intersection. Other study intersections provide limited crosswalks in each direction to bring continuity with adjacent sidewalks. Sidewalk facilities are provided on the following roadway segments within the vicinity of the project site:

- East side of East Main Avenue between Grand Prix Way and Belleto Drive
- West side of East Main Avenue from Grand Prix Way to 545 East Main Avenue (approximately 200 feet north of the intersection); east side of East Main Avenue from East Main Avenue/Montoya Circle to the Belletto Drive intersection
- Grand Prix Way between East Central Avenue and East Main Avenue
- Calle Siena between Grand Prix Way and Ashton Court

LOCAL TRANSIT ROUTE MAP

FIGURE 4.16-1

Bicycle Facilities

Bicycle facilities comprise paths (Class I), lanes (Class II), and routes (Class III). Bicycle paths are paved trails that are separate from roadways. Bicycle lanes are lanes on roadways designated for bicycle use by striping, pavement legends, and signs. Bicycle routes are roadways designated for bicycle use by signs only.

No Class I bike paths or Class III bike routes exist in the project vicinity. Class II bike lanes are located along the following roadways in the study area:

- Cochrane Road between Monterey Road and Madrone Parkway;
- Butterfield Boulevard south of Cochrane Road; and
- Sutter Boulevard from Cochrane Road to Butterfield Boulevard.
- East Main Avenue on the east side of the roadway and discontinuous segments on the west side of the roadway between Butterfield and Conduit Road

4.16.2 Environmental Checklist and Discussion of Impacts

TRANSPORTATION/TRAFFIC					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
1) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐	1,2
2) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐	1
3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒	1,22
4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	☐	☐	☒	☐	1

TRANSPORTATION/TRAFFIC					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
5) Result in inadequate emergency access?	☐	☐	☒	☐	1
6) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐	1,2

4.16.2.1 *Project Conditions*

The project will allow for the development of 12 single-family detached residential units. The amount of traffic associated with the project was estimated using the trip generation process. The amount of traffic entering and exiting the project area was estimated on a daily and peak-hour basis.

Trip generation forecasts that would result from the project were made for the weekday AM and PM peak hours. Trip generation was calculated using the Single-Family Detached Dwelling Unit rates identified in Institute of Transportation Engineers (ITE) *Trip Generation Manual*. As shown in Table 4.16-1, implementation of the project will result in approximately 115 new daily vehicle trips with 9 new AM and 12 new PM peak hour vehicle trips.

Table 4.16-1
Weekday Project Trip Generation Rates and Estimates

Use	Size (d.u.)[3]	Daily		AM Peak-Hour[1]				PM Peak-Hour[2]			
		Rate[4]	Trips	Rate[5]	In	Out	Total	Rate	In	Out	Total
Residential	12	9.57	115	0.75	2	7	9	1.01	8	4	12

Notes:
1. Directional distribution: 25% entering, 75% exiting
2. Directional distribution: 63% entering, 37% exiting
3. d.u. = dwelling unit
4. Directional Distribution: 50% entering, 50% exiting
5. Rate per dwelling unit

Source: Trip Generation, 8th Edition, Institute of Transportation Engineers (2008).

According to the City of Morgan Hill *Guidelines for Preparation of Transportation Impact Reports*, a transportation impact analysis is required for projects that add between 50 and 99 net new peak hour trips to the roadway system where nearby intersections are operating at LOS D or worse, or projected to operate at LOS D or worse with traffic added by approved developments, or when a project generates 100 or more net new peak hour trips (consistent with the Valley Transportation Authority [VTA] policy).

Based on the Institute of Traffic Engineers (ITE) *Trip Generation Manual*, the project will generate approximately 9 new AM and 12 new PM peak hour vehicle trips.[56] Due to the low number of

[56] Traffic trips calculated are based upon traffic counts listed in the Institute of Traffic Engineers, *Trip Generation, 8thEdition* for Single-Family Detached. Volume 2 of 3. Pages 290-292.

project-generated trips, the project will not adversely impact levels of service at nearby signalized intersections. **(Less Than Significant Impact)**

Transit, Pedestrian, and Bicycle Facilities

Currently VTA Route 16 provides eight transit stops and VTA Route 68 provides four transit stops within a half-mile of the project site. Patrons utilizing Routes 121, 168 or Caltrain to access the project site will have to walk more than a half-mile to the nearest bus stop or Caltrain station. Transit ridership is, therefore, expected to be minimal and will not conflict with existing or planned transit facilities. **(Less Than Significant Impact)**

The project will include adequate pedestrian circulation facilities. The project will provide sidewalks along East Main Avenue on the southeast border of the site (east of the adjacent and existing residence). A new public sidewalk will be constructed and will border the project's new public street; a new easement will extend from the new sidewalk to the existing open space non-building lot. **(Less Than Significant Impact)**

The City plans to construct a Class II bicycle lane on East Main Avenue, a Class I, II, and III bicycle lanes on Serene Drive, and a Class III bicycle lane on Calle Mazatan near the project site. The project does not conflict with any adopted bicycle plan, policy, or facility.
(Less Than Significant Impact)

Site Access and Circulation

Emergency Vehicle Access

Emergency vehicle access considers two factors: whether the project site is accessible to emergency vehicles from other areas of the City (regional accessibility) and whether the individual parcels or sites within the project are accessible by various types of emergency vehicles (internal accessibility).

With final completion of the project, the project site will be accessed from Calle Siena which will connect to the new public street on-site. The project site is accessible through a variety of roadways, which connect to the remaining areas of the City. The site is anticipated to be serviced by the El Toro fire station, located approximately one mile from the project site.

Design plans will be reviewed by the City to assure adequate emergency access. The project will not, therefore, result in inadequate emergency access. **(Less Than Significant Impact)**

Traffic Hazards

The project includes a sidewalk along both sides of the internal street. A meandering sidewalk exists along East Main Avenue along the eastern boundary of the project. Prior to final approval of the project site plans, the City will confirm that adequate sight distance is provided at all driveways.

With review by the City, the project will be in conformance with applicable standards and policies to avoid design feature hazards.

Air Traffic Patterns

The project site is not located within the South County Airport Influence Area or Height Restriction Area; therefore, development of the site, as proposed, will not change air traffic patterns.[57]
(Less Than Significant Impact)

Applicable Plans and Policies

The project will be consistent with the City's Circulation Element policies in the General Plan and the Bikeways Master Plan Update.

4.16.3 Conclusion

The project will not result in significant impacts to the transportation system.
(Less Than Significant Impact)

[57] Santa Clara County Land Use Commission. *Comprehensive Land Use Plan, South County Airport.* Adopted November 2008. < http://www.sccgov.org/sites/planning/PlansPrograms/ALUC/Pages/ALUC.aspx >. Accessed March 25, 2013.

4.17 UTILITIES AND SERVICE SYSTEMS

The following discussion is based on the City of Morgan Hill's *Sewer System Master Plan* and *Storm Drainage System Master Plan.*

4.17.1 Setting

4.17.1.1 *Water Service*

The City of Morgan Hill provides potable water service to its residential, commercial, industrial, and institutional customers within the City limits. The City's water system facilities include 14 groundwater wells, ten potable water storage tanks, 10 booster stations, and over 160 miles of pressured pipes ranging from two to 14 inches in diameter. The City's water distribution system meets the needs of existing customers. The City has planned and constructed water projects in conjunction with new street construction in anticipation of future growth and water needs.

4.17.1.2 *Sewer System and Wastewater Treatment*

The City of Morgan Hill sewer collection system consists of approximately 135 miles of 6-inch through 30-inch diameter sewers, and includes 15 sewage lift stations and associated force mains. The "backbone" of the system consists of the trunk sewers, generally 12-inches in diameter and larger, that convey the collected wastewater flows through an outfall that continues south to the Wastewater Treatment Facility (WWTF) in Gilroy. The WWTF is jointly owned by the cities of Gilroy and Morgan Hill. The City's existing sewer collection system meets the needs of existing customers. The City has planned and constructed sewer facilities in conjunction with new street construction in anticipation of future growth and sewage needs.

The South County Regional Wastewater Authority (SCRWA) Wastewater Treatment Plant provides service to the cities of Morgan Hill and Gilroy. The treatment plant has capacity to treat an average dry weather flow (ADWF) of 8.5 million gallons per day (mgd) and is currently permitted by the California Regional Water Quality Control Board, Central Coast Region to treat up to 8.5 mgd.[58] Both the cities of Gilroy and Morgan Hill have growth control systems in place which limit unexpected increases in sewage generation. The ADWF for combined flows from Morgan Hill and Gilroy were approximately 6.8 mgd in June through August 2010. Based on combined population projections for both cities, the current capacity of 8.5 mgd will be reached in approximately 2019.[59]

4.17.1.3 *Solid Waste*

Recology South Valley provides solid waste and recycling services to the businesses and residents of the cities of Morgan Hill and Gilroy. Recology South Valley has contracted through 2017 with the

[58] California Regional Water Quality Control Board. *Waste Discharge Requirements, South County Regional Wastewater Authority Wastewater Treatment and Reclamation Facility, Santa Clara County (NPDES Permit No. CA0049964) – Order No. R3-2010-0009*. April 2010.

[59] City of Gilroy. South County Regional Wastewater Authority. *Agenda*. November 2011. MWH Global and Akel Engineering Group. *South County Regional Wastewater Authority. Cities of Gilroy and Morgan Hill. Wastewater Flow Projections*. August 2011.

Salinas Valley Solid Waste Authority to dispose of municipal solid waste at Johnson Canyon Sanitary Landfill. Johnson Canyon Sanitary Landfill is anticipated to reach capacity in 2040.[60]

4.17.1.4 *Storm Drainage*

The City of Morgan Hill is divided into several hydrologically distinct drainage areas. Each drainage area has a system of conveyance facilities, pumps, and detention basins to collect and dispose the runoff. The stormwater runoff from these areas is collected and ultimately discharged into creeks that flow through the City and are tributary to either Monterey Bay or San Francisco Bay. The drainage areas include Coyote Creek, Fisher Creek, Tennant Creek, Madrone Channel, Butterfield Channel, West Little Llagas Creek, and Llagas Creek. Each drainage area has a system of conveyance facilities, pumps, and basins to collect and dispose the runoff.

The project site is located within the Butterfield Channel drainage area. The project site is located within the Butterfield Channel drainage area. Butterfield Channel is an improved channel that drains the area west of US 101 and east of Railroad Avenue to East Little Llagas Creek. The channel merges with Llagas Creek and flows to the Monterey Bay.

4.17.2 Environmental Checklist and Discussion of Impacts

UTILITIES AND SERVICE SYSTEMS					
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐	1,2,19
2) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐	1,2,19
3) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐	1,2,20
4) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐	1,2,21

[60] Phil Couchee, General Manager, Recology South Valley. February 3, 2010.

UTILITIES AND SERVICE SYSTEMS	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
Would the project:					
5) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐	1,2,19, 21
6) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐	1,2
7) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐	1,2

4.17.2.1 *Impacts from the Proposed Project*

Water Service

The project proposes a subdivision to allow for the construction of 12 single-family houses and improvements to an existing open space area. The City has sufficient water supply to serve the project. Based on the City's *Urban Water Management Plan*[61], the City has accounted for the increase in water use based on the General Plan's projection of population growth in the City of Morgan Hill. For these reasons, implementation of the project will not adversely affect the functionality or the capacity of the existing water supply system. **(Less Than Significant Impact)**

Sewer System and Wastewater Treatment

The project will connect to existing sanitary sewer lines in the City streets serving the site, and the City will have sufficient capacity in the sanitary sewer system to support the project. The project, therefore, will not adversely affect the functionality or the capacity of the existing sanitary sewer system. **(Less Than Significant Impact)**

Solid Waste

The City of Morgan Hill has contracted with Recology South Valley to provide solid waste disposal and recycling service within the City. Recology South Valley will dispose of solid waste from the City at Johnson Canyon Sanitary Landfill which has a projected permitted capacity of approximately 13,800,000 cubic yards and is expected to remain open through 2040.[62] The proposed project will result in increased waste disposal from the project site; however, future development would be served by a landfill with adequate capacity to serve the project site. **(Less Than Significant Impact)**

[61] City of Morgan Hill. *2010 Urban Water Management Plan*. Adopted June 2011.
[62] California Integrated Waste Management Board. *Facility/Site Summary Details: Johnson Canyon Sanitary Landfill.* 2008. Available at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/27-AA-0005/Detail/>. Accessed May 17, 2013.

Storm Drainage

The project will add approximately 46,076 s.f. (1.1 acres) of impervious surfaces to the site, which will increase stormwater runoff from the site. Stormwater from the project site will be collected from the streets by storm drains which will: release stormwater into water treatment and retention basins within the open space area, which discharges into the City's stormwater system along Calle Siena and East Main Avenue.

Per the implementation of the SWPPP and other drainage standards implemented by the City, the project should not significantly increase storm water flows into the existing system. The project will be required to minimally retain all water from the 85th percentile of rainfall events (approximately two to five year storm events) on site; therefore, during 85 percent of the rainfall events, the existing storm drain system would not be impacted by the project. Furthermore, the on-site systems (retention basins) will be required to be designed to detain a volume of water up to a 25-year storm event while releasing water at a rate reflective of the 10-year predevelopment flow. This design limits storm water flows off-site to less than 10-year predevelopment flows. The existing public storm water system is already designed to convey a 10-year storm event; therefore, the project should not significantly contribute to any additional flooding during the most frequent events. The final drainage system design for the project will be subject to review and approval by the City of Morgan Hill Public Works Department, who will confirm that the proposed drainage system for the project is consistent with the City's Storm Drainage Master Plan and standard stormwater-related conditions of approval.

As described in Section 4.9, *Hydrology*, the project will incorporate mitigation measures and BMPs to avoid and minimize impacts to water quality from erosion during construction activities. With incorporation of mitigation measures and BMPs, the project will not result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which will result in significant environmental effects. **(Less Than Significant Impact)**

4.17.3 Conclusion

Approval of the 12 residential units through the RDCS process will ensure consistency with the growth rate in the City's General Plan and the project will not, therefore, exceed the City's planned water, wastewater treatment, solid waste, electrical, or gas use demand. The project will not increase demand for utility services and systems beyond the utility provider's supply capabilities. Construction of the proposed drainage improvements will not result in significant environmental impacts. **(Less Than Significant Impact)**

4.18 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Source(s)
1) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐	1-30
2) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐	1-30
3) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☐	☐	☒	☐	1-30
4) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐	1-30

4.18.1.1 *Findings*

The proposed project will not impact mineral resources, agriculture, or forest resources. The project will result in less than significant impacts related to geology, greenhouse gas emissions, land use, population and housing, public services, recreation, transportation, and utility systems in the City of Morgan Hill.

The project will result in temporary air quality, water quality, and noise impacts resulting from construction of the project. These impacts will be reduced to a less than significant level through implementation of the mitigation measures and best management practices proposed as mitigation in this Initial Study. There are no known cultural resources at the site; however, construction activities could uncover unknown subsurface cultural resources. With implementation of the standard mitigation measures listed in this Initial Study, impacts to unknown cultural resources at the site will be reduced to a less than significant level.

Construction of the project could result in vegetation removal that could result in the incidental loss of eggs or nestlings which are protected under the Migratory Bird Treaty Act (MBTA). With completion of the applicable pre-construction bird surveys and implementation of a buffer zone in consultation with the CDFW (if applicable), impacts to protected birds at the project site will be mitigated to a less than significant level.

The project could result in the loss of four ordinance-sized coast live oak trees, which are considered scenic resources in the City of Morgan Hill. With the implementation of mitigation measures presented in Sections 4.1, *Aesthetics*, the one very large significant coast live oak tree will be protected and will remain on-site. To preserve the mature coast live oak tree, long-term care of the tree will be implemented in accordance with the City's requirements. The remaining three coast live oak trees will either by transplanted or replaced at a two to one ratio on-site.

Based on the site's habitat type, the project could result in significant impacts to the burrowing owl and migratory birds, as suitable nesting opportunities exist on-site. Implementation of mitigation listed in this Initial Study, however, will reduce impacts to these species to a less than significant level.

Noise levels will exceed the City's threshold for acceptable interior noise at Lots 5, 6, 7, and 8. Installation of noise barriers, described as mitigation in this Initial Study, will reduce interior noise level impacts to a less than significant level.

There are currently no anticipated projects adjacent to the site, with the exception of minor roadway improvements (such as the addition or improvements to bicycle lanes) to East Main Avenue. Improvements to East Main Avenue may result in temporary construction-related noise or impacts to cultural resources. Other development projects in the area that will not be exempt from CEQA will be required to undergo environmental review and mitigate significant impacts to a less than significant level, as feasible. It is not anticipated that the project in combination with future projects will result in cumulatively considerable impacts.

With the implementation of mitigation measures described in this report, development of the site with residential uses will not result in significant environmental impacts to biologic or cultural resources, impede attainment of long-term environmental goals, or cause substantial adverse effects on human beings, either directly or indirectly. Development on the site will be subject to applicable policies of the General Plan and existing laws and regulations as described in this Initial Study to reduce all anticipated environmental effects to an acceptable level.

Checklist Sources

1. CEQA Guidelines - Environmental Thresholds (Professional judgment and expertise and review of project plans).
2. City of Morgan Hill. *Morgan Hill General Plan*. Last Revised February 2010. Available at: <http://www.morgan-hill.ca.gov/index.aspx?nid=75>. Accessed March 26, 2013.
3. City of Morgan Hill. *Code of Ordinances. Supplement History Table.* Last Revised November 2012. Available at: <http://library.municode.com/index.aspx?clientId=16502>. Accessed March 26, 2013.
4. California Department of Transportation. *California Scenic Highway Program. Scenic Highway Routes*. Last Updated April 2012. Available at: <http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm>. Accessed March 27, 2013.
5. City of Morgan Hill. *Zoning Map*. February 2012.
6. California Department of Conservation. *Santa Clara County Important Farmland*. June 2011. Available at: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/scl10.pdf>. Accessed March 14, 2013.
7. Bay Area Air Quality Management District (BAAQMD). *Bay Area 2010 Clean Air Plan*. September 2010. Available at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans/Clean-Air-Plans.aspx>. Accessed March 26, 2013.
8. BAAQMD. *California Environmental Quality Act Air Quality Guidelines*. Updated May 2011.
9. Illingworth & Rodkin, Inc. *Main-Glenrock Residential Project TAC Construction Risk Assessment*. April 2013.
10. Santa Clara County, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, City of San Jose, City of Gilroy, City of Morgan Hill, California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service. *Santa Clara Valley Habitat Plan/Natural Community Conservation Plan (HCP/NCCP) Project. Final Santa Clara Valley Habitat Plan*. August 2012.
11. Barrie D. Coate and Associates. *A Review of the Trees at 605 E. Main, Morgan Hill*. February 2011; *A Review of the Pruning at 605 E. Main, Morgan Hill.* August 2013.
12. Circa. *Historic Resource Assessment*. March 2012.
13. City of Morgan Hill. *Cultural Resources Supplement, Archaeological Resources: Morgan Hill General Plan* and *Archaeological Sensitivity Map*. April 2000.
14. TMakdissy Consulting, Inc. *Geotechnical Investigation on Proposed 12 Units Residential Development*. May 2012.
15. California Department of Conservation. *Special Studies Zone. Morgan Hill. Revised Official Map. January 1982*. Available at: <http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm>. Accessed March 26, 2013.
16. Association of Bay Area Governments. *Earthquake and Hazards Information.* <http://gis.abag.ca.gov/website/liquefactionsusceptibility/>. Accessed March 25, 2013.
17. City of Morgan Hill. *Geology, Geologic and Geotechnical Hazards. Ground Movement Potential Map.* December 1991.
18. *Santa Clara County Geologic Hazard Zones*. Adopted February 2002. Last Modified December 2012. Available at: <http://www.sccgov.org/sites/planning/GIS/GeoHazardZones/Pages/SCCGeoHazardZoneMaps.aspx>. Accessed March 26, 2013.

19. GeoSolve, Inc. Phase I Environmental Site Assessment. October 2010.
20. GeoSolve, Inc. Additional Phase II Environmental Site Assessment. November 2010.
21. GeoSolve, Inc. Remedial Completion Report. December 2010.
22. Santa Clara County. Airport Land Use Commission. *Comprehensive Land Use Plan, South County Airport.* Adopted November 2008. <http://www.sccgov.org/sites/planning/PlansPrograms/ALUC/Pages/ALUC.aspx >. Accessed March 25, 2013.
23. California Emergency Management Agency. *Standardized Emergency Management Guidelines.* September 2006. Available at: <http://develop.oes.ca.gov/WebPage/oeswebsite.nsf/Content/7386D576C12F26F488257417006C07A7?OpenDocument>. Accessed February 27, 2013.
24. Association of Bay Area Governments. *Taming Natural Disasters. Multi-Jurisdictional Local Hazard Mitigation Plan for the San Francisco Bay Area*. Adopted 2005. Updated 2010. Available at: <http://quake.abag.ca.gov/mitigation/>. Accessed February 27, 2013.
25. City of Morgan Hill. *City of Morgan Hill Wildland Urban Interface.* March 2009. Available at: <http://www.morgan-hill.ca.gov/index.aspx?nid=657>. Accessed March 25, 2013.
26. Federal Emergency Management Agency (FEMA). *Flood Insurance Rate Map. Santa Clara County, California. Map Number 06085C0444H.* May 2009. Available at: <https://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1
27. Association of Bay Area Governments. *Dam Failure Inundation Maps*. Last Modified January 2013. Available at: <http://quake.abag.ca.gov/dam-failure/>. Accessed March 12, 2013.
28. Association of Bay Area Governments. 2009. *Tsunami Inundation Map for Coastal Evacuation*. Available at: <http://quake.abag.ca.gov/tsunamis/>. Accessed March 27, 2013.
29. California Department of Conservation. Office of Mine and Reclamation. *Surface Mining and Reclamation Act and Associated Regulations*. January 2007. Available at: <http://www.conservation.ca.gov/omr/smara/Documents/010107Note26.pdf>. Accessed March 5, 2013.
30. Illingworth & Rodkin, Inc. *Main-Glen Rock Residential Project Environmental Noise Assessment, Morgan Hill, California.* March 2013.

SECTION 5 REFERENCES

Association of Bay Area Governments. *Dam Failure Inundation Maps*. Last Modified January 2013. Available at: <http://quake.abag.ca.gov/dam-failure/>. Accessed March 12, 2013.

--. 2012. *Earthquake and Hazards Information.* Available at: <http://gis.abag.ca.gov/website/liquefactionsusceptibility/>. Accessed March 25, 2013.

--. 2009. *Projections and Priorities 2009. Building Momentum. San Francisco Bay Area Population, Household, and Job Forecasts*.

--. *2010. Taming Natural Disasters. Multi-Jurisdictional Local Hazard Mitigation Plan for the San Francisco Bay Area*. Adopted 2005. Updated 2010. Available at: <http://quake.abag.ca.gov/mitigation/>. Accessed February 27, 2013.

--. 2009. *Tsunami Inundation Map for Coastal Evacuation*. Available at: <http://quake.abag.ca.gov/tsunamis/>. Accessed March 27, 2013.

Barrie D. Coate and Associates. *A Review of the Pruning at 605 E. Main, Morgan Hill*. August 2013.

Barrie D. Coate and Associates. *A Review of the Trees at 605 E. Main, Morgan Hill*. February 2011.

Bay Area Air Quality Management District. *Bay Area 2010 Clean Air Plan*. September 2010. Available at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans/Clean-Air-Plans.aspx>. Accessed March 26, 2013.

--. *Air Quality Standards and Attainment Status*. Available at: <http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm>. Accessed March 6, 2013.

--. 2011. *California Environmental Quality Act Air Quality Guidelines*. May.

--. 2012. *Stationary Source Screening Analysis Tool*. Last Updated: August. Available at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>. Accessed March 25, 2013.

California Department of Conservation. S*anta Clara County Important Farmland.* June 2011. Available at: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/scl10.pdf>. Accessed March 14, 2013.

--. 1982. *Special Studies Zone. Morgan Hill. Revised Official Map*. January. Available at: <http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm>. Accessed March 26, 2013.

--. 2007. Office of Mine and Reclamation. *Surface Mining and Reclamation Act and Associated Regulations*. January 2007. Available at: <http://www.conservation.ca.gov/omr/smara/Documents/010107Note26.pdf>. Accessed March 5, 2013.

California Department of Fish and Wildlife, California Department of Water Resources, National Marine Fisheries Service, U.S. Department of the Interior, and U.S. Fish and Wildlife. *Environmental Water Account*. *Draft Environmental Impact Statement/Environmental Impact Report*. Volume 1, Chapter 7. July 2003. Available at: <http://www.usbr.gov/mp/EWA/DraftEIS-EIR.html>. Accessed March 25, 2013.

California Department of Forestry and Fire Protection. *Santa Clara County*. *Fire Hazard Severity Zones in State Responsibility Area*. Adopted November 2007. Available at: <http://www.fire.ca.gov/fire_prevention/fhsz_maps/fhsz_maps_santaclara.php>. Accessed February 27, 2013.

California Department of Transportation. *California Scenic Highway Program. Scenic Highway Routes*. Last Updated April 2012. Available at: <http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm>. Accessed March 27, 2013.

--. 2004. *Transportation- and Construction-Induced Vibration Guidance Manual*. June. Available at: <http://www.dot.ca.gov/hq/env/noise/pub/vibrationmanFINAL.pdf>. Accessed March 14, 2013.

California Emergency Management Agency. Standardized Emergency Management Guidelines. September 2006. Available at: <http://develop.oes.ca.gov/WebPage/oeswebsite.nsf/Content/7386D576C12F26F488257417006C07A7?OpenDocument> . Accessed February 27, 2013.

California Energy Commission. *2009 California Climate Adaptation Strategy Discussion Draft.* August 2009. Available at: <http://resources.ca.gov/climate_adaptation/docs/Statewide_Adaptation_Strategy.pdf >. Accessed March 25, 2013.

--. 2009. *Building Energy Efficiency Program*. 2013. Available at: <http://www.energy.ca.gov/title24/>. Accessed April 26, 2013.

California Environmental Protection Agency. *Cortese List: Section 65962.5(a).* October 2011. Available at: <http://www.calepa.ca.gov/sitecleanup/corteselist/SectionA.htm>. Accessed March 26, 2013. .

California Public Utilities Commission. *GHG Calculator version 3c*. October 2010. Available at: <http://ethree.com/public_projects/cpuc2.php>. Accessed March 25, 2013.

California Regional Water Quality Control Board. *Waste Discharge Requirements, South County Regional Wastewater Authority Wastewater Treatment and Reclamation Facility, Santa Clara County (NPDES Permit No. CA0049964) – Order No. R3-2010-0009*. April 2010.

Circa. *Historic Resource Assessment*. March 2012.

City of Gilroy. South County Regional Wastewater Authority. *Agenda*. November 2011. MWH Global and Akel Engineering Group. *South County Regional Wastewater Authority. Cities of Gilroy and Morgan Hill. Wastewater Flow Projections*. August 2011.

City of Morgan Hill. *Archaeological Sensitivity Map.* April 2000.

--. 2011. *2010 Urban Water Management Plan*. Adopted June 2011.

--. 2008. *Bikeways Master Plan Update*. May. Available at: < http://www.morgan-hill.ca.gov/DocumentCenter/Home/View/2718>. Accessed May 3, 2013.

--. 2011. City Council Policies and Procedures. *Residential Development Control System Implementation Policies (RDCS).* Revised July 2011. Available at: <http://www.morgan-hill.ca.gov/index.aspx?NID=109>. Accessed March 26, 2013.

--. 2009. *City of Morgan Hill Wildland Urban Interface.* March 2009. Available at: <http://www.morgan-hill.ca.gov/index.aspx?nid=657>. Accessed March 25, 2013.

--. 2012. *Code of Ordinances. Supplement History Table*. Last Revised November. Available at: <http://library.municode.com/index.aspx?clientId=16502>. Accessed March 26, 2013.
--. 2000. *Cultural Resources Supplement, Archaeological Resources: Morgan Hill General Plan*. April.

--. 2012. *Design Standards. Storm Drain Design Standards: Section 4*. Available at: <http://www.morgan-hill.ca.gov/DocumentView.aspx?DID=808>. Accessed March 13, 2013.

--. 2010. *Draft Housing Element*. September.

--. 1991. *Geology, Geologic and Geotechnical Hazards. Ground Movement Potential Map.* December.

--. 2010. *Guidelines for Preparation of Traffic Impact Reports.* February.

--. 2011. *Morgan Hill Agricultural Policies and Implementation Program*. December. Available at: <http://www.morganhill.ca.gov/index.aspx?NID=663>. Accessed March 26, 2013.

--. 2010. *Morgan Hill General Plan.* Last Revised February. Available at: <http://www.morgan-hill.ca.gov/index.aspx?nid=75>. Accessed March 26, 2013.

--. 2000. *Parks, Facilities and Recreation Programming Master Plan.* December. Available at: <http://www.morgan-hill.ca.gov/index.aspx?NID=187>. Accessed March 26, 2013.

--. 2002. *Sewer System Master Plan*. January. Available at: <http://www.morgan-hill.ca.gov/index.aspx?NID=369>. Accessed March 26, 2013.

--. 2002. *Storm Drainage System Master Plan.* January. Available at: <http://ca-morganhill.civicplus.com/DocumentView.aspx?DID=622>. Accessed March 13, 2013.

--. 2012. *Zoning Map*. February.

DVP and Associates. *Removal Action Workplan. Former University of California Bay Area Research and Extension Center (BAREC), Santa Clara*. October 2007. Available at: <http://www.envirostor.dtsc.ca.gov/public/community_involvement/5021100699/Final%20RAW.pdf >. Accessed March 25, 2013.

Federal Emergency Management Agency (FEMA). *Flood Insurance Rate Map Community Panel Number 06085C0443H*. 2009. Available at: <https://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1>. Accessed March 25, 2013.

GeoSolve, Inc. *Additional Phase II Environmental Site Assessment*. November 2010.

--. 2010. *Phase I Environmental Site Assessment*. October.

--. 2010. *Remedial Completion Report*. December 2010.

Illingworth & Rodkin, Inc. *Main-Glenrock Residential Project Environmental Noise Assessment, Morgan Hill, California.* March 2013.

--. 2013. *Main-Glenrock Residential Project TAC Construction Risk Assessment.* April.

Institute of Transportation Engineers. *Trip Generation. An ITE Informational Report*. Eighth Edition. Volume 2 of 3. Pages 290-292. 2008.

International Code Council. 2010 California Building Code, Title 24, Part 2, Section 1613, Earthquake Loads. Available at: <http://publicecodes.cyberregs.com/st/ca/st/b200v10/index.htm>. Accessed March 26, 2013.

IPCC. *Summary for Policymakers*, In "Climate Change 2007: The Physical Science Bases. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change" [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. 2007. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available at: http://ipcc.ch/. Accessed March 25, 2013.

Live Oak Associates, Inc. *Biological Constraints Analysis of the South Campoli Drive Site, Morgan Hill, Santa Clara County, California*. February 2013.

Santa Clara County. Airport Land Use Commission. *Comprehensive Land Use Plan, South County Airport.* Adopted November 2008. <http://www.sccgov.org/sites/planning/PlansPrograms/ALUC/Pages/ALUC.aspx >. Accessed March 25, 2013.

--. 2012. *Santa Clara County Geologic Hazard Zones*. Adopted February 2002. Last Modified December 2012. Available at:

<http://www.sccgov.org/sites/planning/GIS/GeoHazardZones/Pages/SCCGeoHazardZoneMaps.aspx >. Accessed March 26, 2013.

Santa Clara County, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, City of San Jose, City of Gilroy, City of Morgan Hill, California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service. *Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) Project*. *Final Santa Clara Valley Habitat Plan.* August 2012.

Santa Clara Valley Water District. *2012 Groundwater Management Plan*. July 2012.

--. 2012. *Groundwater Condition Report*. December. Available at: <http://www.valleywater.org/Services/GroundwaterMonitoring.aspx>. Accessed March 12, 2013.

--. *Uvas-Llagas Watershed Map.* Available at: <http://www.valleywatercompplan.org/watersheds/view/449 >. Accessed March 25, 2013.

State Water Resources Control Board, Division of Water Quality. *Construction General Permit Fact Sheet*. Last Updated January 2013. Available at: <http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml>. Accessed March 26, 2013.

TMakdissy Consulting, Inc. *Geotechnical Investigation on Proposed 12 Units Residential Development*. May 2012.

U.S. Census Bureau, 2010 Census of Population. State & County QuickFacts: Morgan Hill (City). Last Modified January 2013. Available at: <http://quickfacts.census.gov/qfd/index.html>. Accessed March 26, 2013.

--. 2012. Population Division. *Table 3. Annual Estimates of the Resident Population for Incorporated Places in California: April 1, 2010 to July 1, 2011*. June 2012. Available at: <http://www.census.gov/popest/data/cities/totals/2011/SUB-EST2011-3.html>. Accessed March 26, 2013.

U.S. Department of Agriculture, Natural Resources Conservation Service. *Custom Soil Resource Report for Eastern Santa Clara Area, California.* January 2013.

U.S. Department of the Interior, Bureau of Land Management. *Draft Engineering Evaluation/Cost Analysis Report. Chicago Research and Mercury Mines, Lake County, California. Appendix A - EE/CA Field Investigation Summary*. October 2011. Available at: <http://www.blm.gov/ca/st/en/fo/ukiah/chicago_research_mercury.print.html>. Accessed March 25, 2013.

U.S. Geological Survey. *Landslide Hazards.* USGS Fact Sheet FS-071-00. May 2000.

SECTION 6 AUTHORS AND CONSULTANTS

Authors: **City of Morgan Hill**
Andrew Crabtree, Community Development Director
Steve Golden, Associate Planner

Consultants: **David J. Powers & Associates**
Environmental Planners and Consultants
Akoni Danielsen, Principal Project Manager
Julie Wright, Senior Project Manager
Amber Sharpe, Assistant Project Manager
Zach Dill, Graphic Artist

Circa
Historic Resource Consultants
Sheila McElroy, Principal

Illingworth & Rodkin, Inc.
Noise and Air Quality Consultants
James A. Reyff, Project Scientist
Michael S. Thill, Senior Associate

GeoSolve, Inc.
Hazardous Materials Consultants
Robert D. Campbell, Principal

TMakdissy Consulting, Inc.
Geotechnical Consultants
Tom Makdissy, Principal